



master plan study

BLUFF POINT
a shoreline state park

groton , connecticut







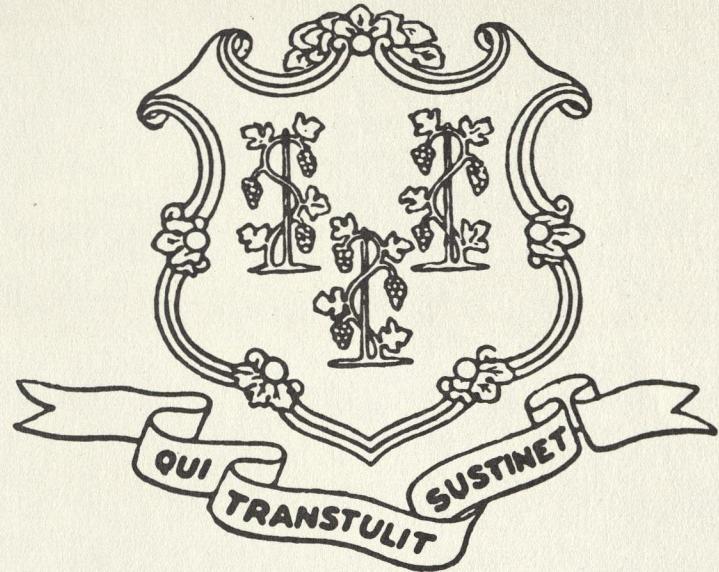


B L U F F P O I N T - *master plan study*

design principles for a shoreline state park

groton, connecticut
april 1965
project BI - T - 64

connecticut state park & forest commission



CONNECTICUT STATE OFFICIALS • 1965

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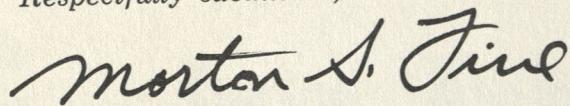
Timothy J. Murphy, Jr., Commissioner

April 15, 1965

In June, 1964, the State of Connecticut authorized a design study for the development of the lands surrounding Bluff Point in Groton. Herein contained is the documentation of that study. It serves to carry further the intention of the 1961 session of the Connecticut General Assembly, which appropriated the necessary funds to purchase the area, thus providing the initial thrust toward the realization of its development.

As the inevitable growth and expansion of a population present their corresponding requirements, the assurance of control is mandatory. The intelligent answer to this call lies within foresighted PREPARATION in advance of their emergence as problems. Proper development of Bluff Point will serve as an additional measure of action by the State of Connecticut to provide adequate and stimulating recreational facilities for its growing population.

Respectfully submitted,



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Method of Study

study purpose

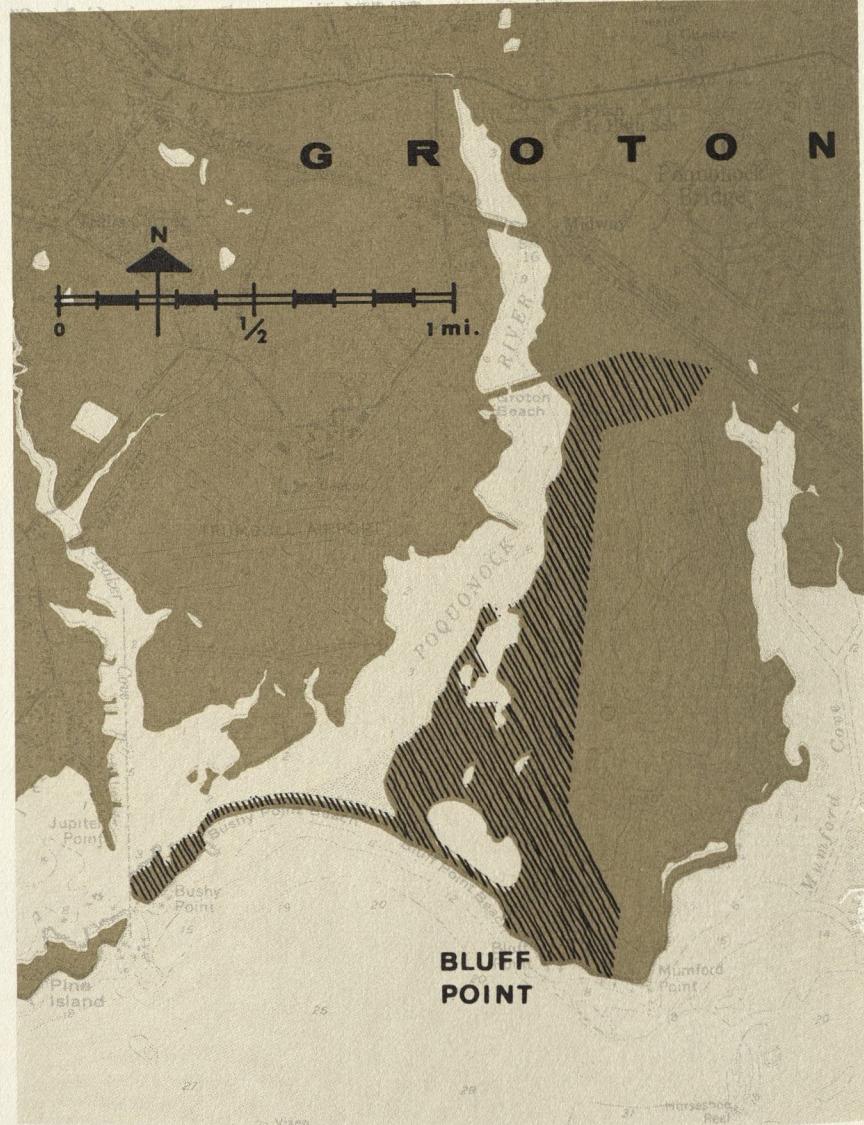
The apparent advantages of a rapidly increasing and progressive people carry with them a system of problems proportional to their rate of increase. A salient example of one of these problems is the provision of adequate recreational facilities as dictated by the increased amount of leisure time. This results in an equally intensified demand on existing recreational sites, thus increasing the significance of assuring that land acquired will be most efficiently utilized.

The General Assembly of the State of Connecticut, in its 1961 Session, voted to appropriate funds to provide the non-Federal share for acquiring the lands surrounding Bluff Point in Groton. These lands, when developed as a State Park, will aid in meeting the recreational needs of the people of Connecticut. With considerate respect for the inherent qualities possessed by this area, the legislature wisely recognized the need for the establishment of POLICIES to ensure the efficient utilization of this natural feature.

Therefore, it is the purpose of this study to establish these policies through an investigation of the following criteria:

1. The examination and discovery of those EXISTING CONDITIONS which (a) portray the natural beauty; (b) indicate the patterns of circulation, and (c) assign the most appropriate use to the various portions of this area.
2. To project and mold these conditions into an imaginative, yet meaningful, CONCEPT OF DEVELOPMENT which will most sensitively accommodate the increased demands placed on this recreation area.
3. To establish the most orderly and realistic PROCEDURE for the attainment of this concept.

In the presentation of this and, in fact, all Master Plan recommendations, it is essential to point out that a graphic presentation is inherently necessary to clearly convey the GUIDE PRINCIPLES of such a study. It should remain evident, however, that any competent designer should be free to interpret these principles in his individual style, providing that the translation is premised upon the fulfillment and representation of those determined Guide Principles.



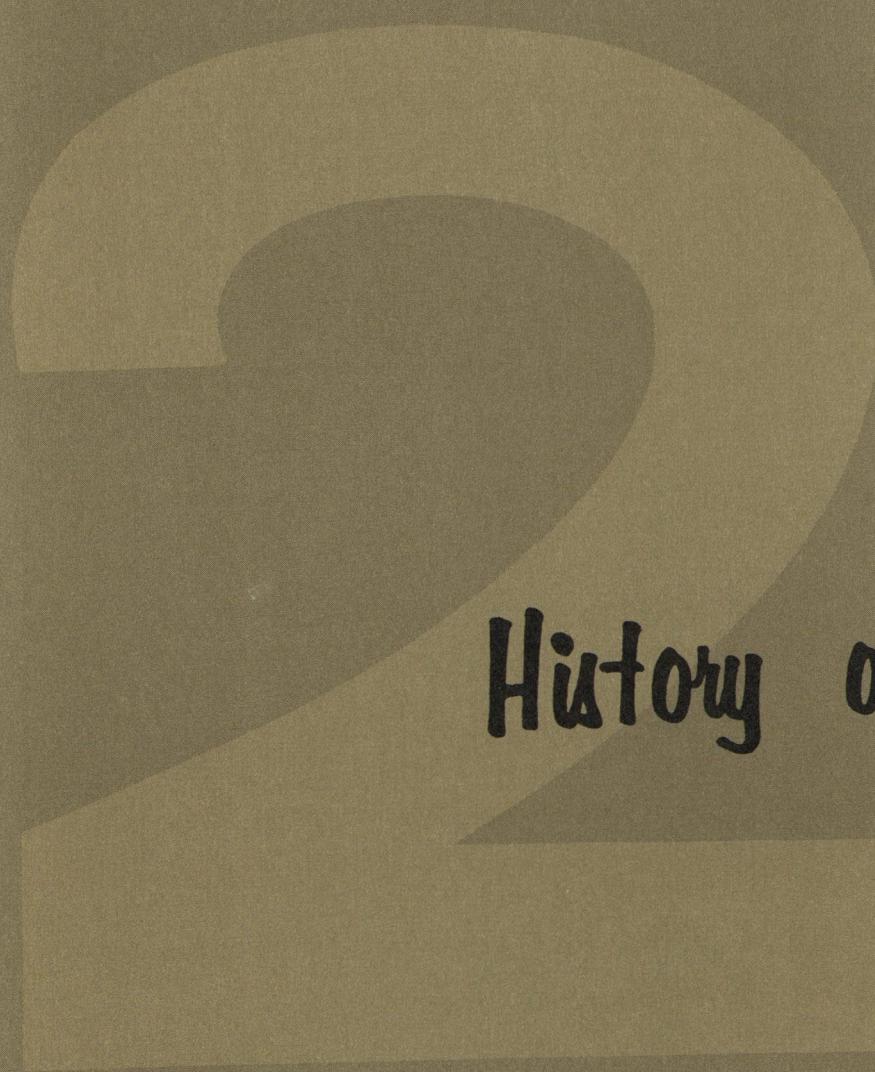
study procedure

Following the appropriation of funds in the 1961 Session of the General Assembly, ownership of the Bluff Point lands was realized. Certain corrective measures, exemplified by the elimination of uninvited campers, were taken to erase all detrimental occurrences on the site. Having, at this point, been reserved in an undisturbed state of being, it was authorized that a study be made of this land in order to determine the guide policies for the development of this park.

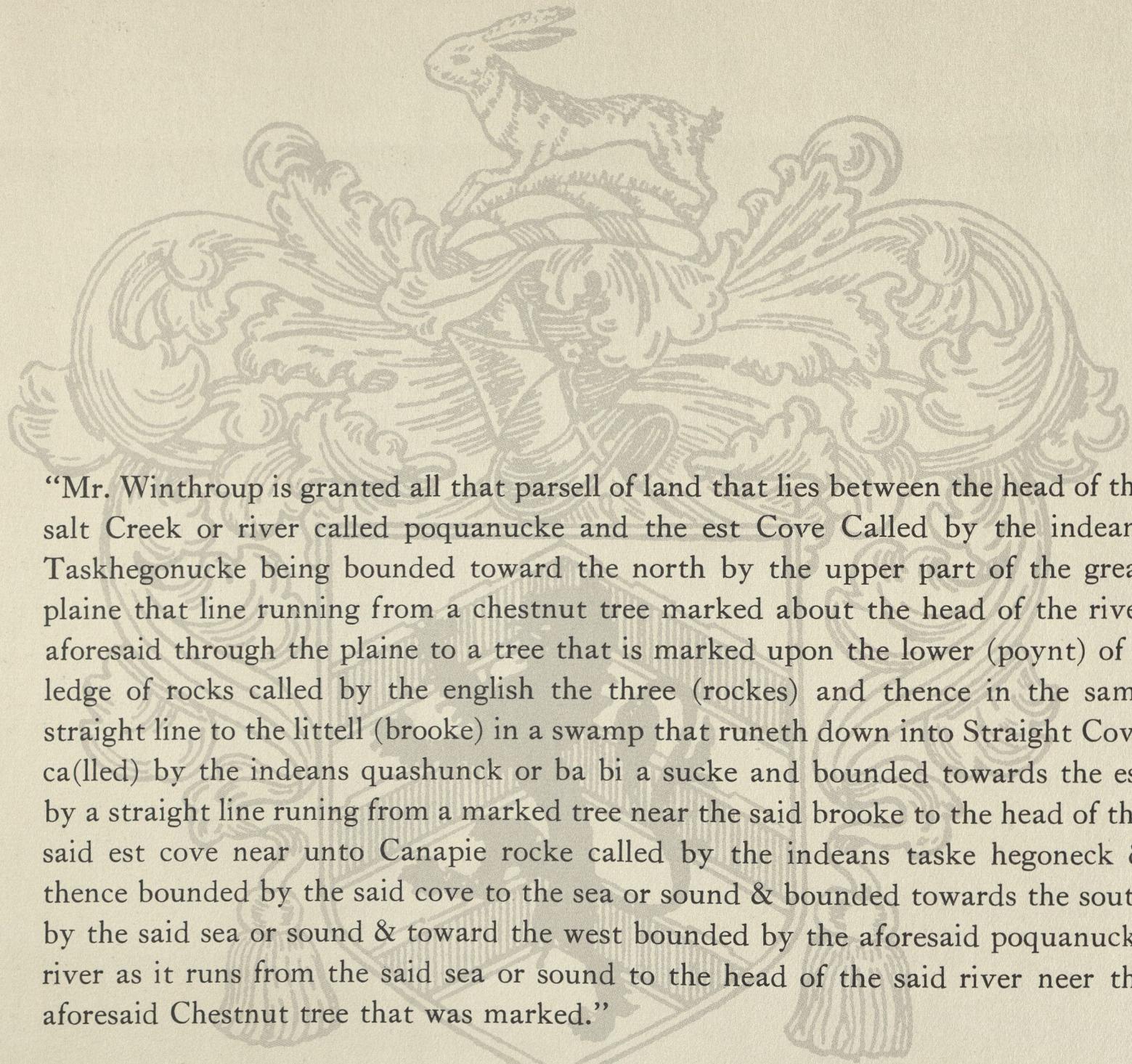
The scope of a project of this type is, by its nature, affected by a myriad of interests. A direct consideration of each interest alone, and in combination with the others, is necessary in the determination of its relative significance and adaptability to this specific site. A reflection of the consideration of these interests is shown in the early communication and consultation with individuals and groups holding concern for the development of Bluff Point. Typical of these were factors representing: public health, conservation, engineering, town planning, historical preservation, public transportation, aeronautics and the interests of the private individual.

Coincident with these early contacts, the study concerned itself with the investigation of alternatives of plan development. While ultimate decisions are represented in a singular concept of plan design, the thorough examination of alternate approaches was necessary. These were evaluated by considering the conditions which resulted when each factor was, by itself, allowed to dominate the patterns of development. As these evaluations gave evidence to development tendencies, meetings were held with the Park & Forest Commission to evaluate these criteria in light of existing administrative policies. Results of the meetings then brought about a re-evaluation of our embryonic conceptions. Conclusions derived from these re-evaluations, together with realistic considerations of legislative policies, were formulated to provide the greatest stimulation for the development of Bluff Point as a State Park.

This Master Plan of Development is herein presented, along with its shaping factors, to serve as a guide for the continual reassessment of future factors which will affect development of the Bluff Point lands.



History of Site



“Mr. Winthrop is granted all that parsell of land that lies between the head of the salt Creek or river called poquanucke and the est Cove Called by the indeans Taskhegonucke being bounded toward the north by the upper part of the great plaine that line running from a chestnut tree marked about the head of the river aforesaid through the plaine to a tree that is marked upon the lower (poynt) of a ledge of rocks called by the english the three (rockes) and thence in the same straight line to the littell (brooke) in a swamp that runeth down into Straight Cove ca(lled) by the indeans quashunck or ba bi a sucke and bounded towards the est by a straight line runing from a marked tree near the said brooke to the head of the said est cove near unto Canapie rocke called by the indeans taske hegoneck & thence bounded by the said cove to the sea or sound & bounded towards the south by the said sea or sound & toward the west bounded by the aforesaid poquanucke river as it runs from the said sea or sound to the head of the said river neer the aforesaid Chestnut tree that was marked.”

winthrop

The intended lands, upon which Groton and New London are now located, were at that time claimed in conquest by the Massachusetts Bay Colony. In Caulkins', "History of New London" is found the following description:

"At a General Court held in Boston 6th of May 1646 whereas Mr. John Winthrop, Jun. and some others have by allowance of this Court begun a plantation in the Pequot Country, which appertains to this jurisdiction as part of our proportion of the conquered country, and whereas the Court is informed that some Indians who are now planted upon the place where the plantation is begun, are willing to remove from their planting ground for the more quiet and convenient settling of the English there, so that they may have another convenient place appointed — it is therefore ordered that Mr. John Winthrop may appoint unto such Indians as are willing to remove their lands on the other side, that is on the East side of the Great River of the Pequot Country, or some other place for their convenient planting and subsistence which may be to the good liking and satisfaction of the said Indians, and likewise to such of the Pequot Indians as shall desire to live there, submitting themselves to the English government & c. And whereas Mr. Thomas Peters is intending to inhabit in the said plantation — this said Court doth think fit to join him to assist the said Mr. Winthrop for the better carrying on the work of said plantation. A true copy, & c. New London Records, Book VI."

This, then, was to be the initial colonizing of the New London area, which was finally brought under Connecticut jurisdiction through decision at a Commissioner's Court held at Boston in July 1647.

Arriving in the area in 1646, Winthrop and the settlers began what was then called the Pequot plantation. By 1648, the Indians who had settled along the banks on the east side of the Pequot (Thames) River were removed to settle in the area now known as Noank. Their former lands (now Groton) were then apportioned to the leading settlers of New London, allowing John Winthrop the first choices. The "Ancientest Book for 1648-49-50" contains the following record:

"Mr. Winthrop is granted all that parsell of land that lies between the head of the Salt Creek or river called poquanucke and the est Cove Called by the indeans Taskheqonucke being bounded toward the north by the upper part of the great plaine that line running from a chestnut tree marked about the head of the river aforesaid through the plaine to a tree that is marked upon the lower (poynet) of a ledge of rocks called by the english the three (rockes) and thence in the same straight line to the littell (brooke) in a swamp that runeth down into Straight Cove ca(lled) by the indeans quashunk or ba bi a sucke and bounded towards the est by a straight line running from a marked tree near the said brooke to the head of the said est cove near unto Canapie rocke called by the indeans taskhegoneck & thence bounded by the said same cove to the sea or sound & toward the west bounded by the aforesaid poquanucke river as it runs from the said sea or sound to the head of the said river neer the aforesaid chestnut tree that was marked."

The lands described above include those areas now covered by Bluff Point and Groton Long Point.

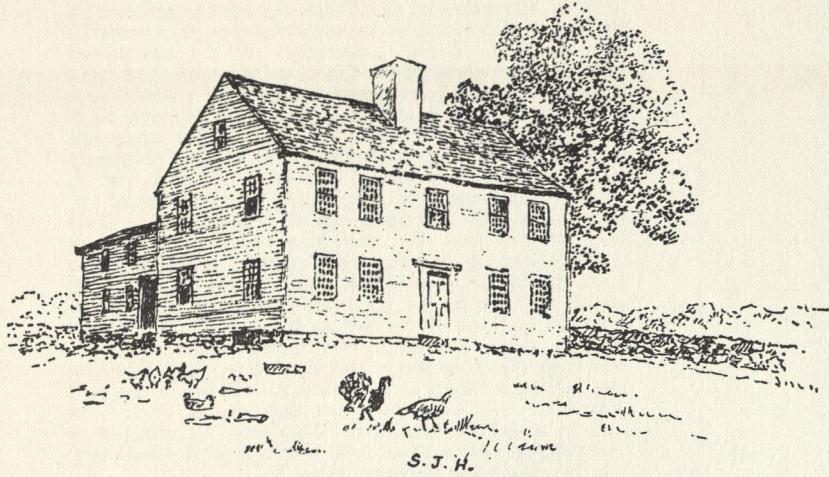
As the settlement began to grow, the reputation of John Winthrop, the Younger, grew with it. Serving as Connecticut's first Governor from 1657 to 1676 he was also the Agent of Connecticut at the Court of Charles II. The settlement on this side of the "Pequot River" was to be known as "the East Side" until 1704 when it was officially designated "Groton", in honor of Winthrop's birthplace in England.

historical background

Bluff Point together with surrounding Groton and New London are excellent representative areas of early Connecticut history. Originally inhabited by tribes of Pequot Indians, history books glow with early accounts of the struggles which white colonists underwent in the settling of this area.

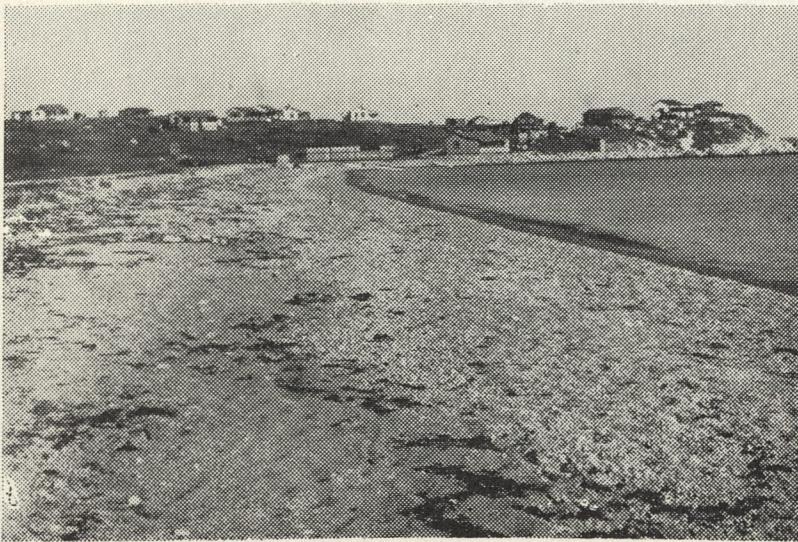
The summer of 1645 is held to be the beginning of documented reports as John Winthrop, the Younger, is said to have visited the area in preparation for the settling of New London.

John Winthrop, the Younger, eldest son of Governor John Winthrop of Massachusetts, was the original title holder to the Bluff Point lands, and first Governor of Connecticut. Born at Groton, in Suffolk, England, on February 12, 1605, he was to follow his father to New England in November of 1631, where he then established a plantation at Agawam, later called Ipswich. Following this success, he was commissioned to begin a plantation in Connecticut.



ORIGINAL WINTHROP HOUSE
Built by the Winthrop Family, this home stood until
consumed by fire in 1962.

Photo courtesy Groton Tercentenary Committee.



COTTAGES DOT BLUFF POINT HILLSIDES
During the 1930's, as many as 200 cabins, cottages,
and even a casino were built. The 1938 hurricane
erased their existence.

Photo courtesy The New London Evening Day
Newspaper.

Following the original grant to Winthrop in 1648, the title of these lands had changed ownership only twice, before being finally acquired by the State in 1961. The Winthrop family sold the lands to Latham Avery in 1818 who held title until 1856 when the lands were purchased by Henry Gardiner.

It is interesting to note that during each case of ownership, the actual owner never lived on the site. During Winthrop's control, records indicate that the land was leased first to a farmer named Francis Hall. He used the then open lands for the pasturing of his sheep and horses on the slopes. It is believed that he must have either camped on the land or lived in what is now Poquonock Bridge, for he never built a house on the site. Second to lease the land from the Winthrop family was Anthony Ashley, the first colonist to actually live on the land. He is credited with erecting the first house on the site around the year 1690. Bad luck or poor craftsmanship must have prevailed, for the house fell down around 1725. Things took a turn for the better when, in the late 1700's, the land was used as an elegant horse farm for the Winthrop family. Under the direction of Fitz-John Winthrop, John the Younger's son, a stately 16-room dwelling was erected along with numerous outbuildings which included cow barns for 60 head, a ten-stall horse barn, sheep pens, and sheds for the storage of corn and silage. Actual management of the estate was supervised by a man named Benjamin Brown, who lived in the house with his family.

The area had direct linkings with colonial history as New London and Groton were the bases of many marine privateers who, during the Revolutionary War, would sail from here to later return with the British ships which they had captured. From their vantage point of Bluff Point, the Brown family could probably see Benedict Arnold's ships enter the harbor, in 1781, to burn New London and begin the Battle of Groton Heights. The solitary Groton Monument today commemorates that battle in the defense of Fort Griswold where Colonel Ledyard and half his troops gave their lives.

In 1818, title to the Bluff Point lands was acquired by Latham Avery, whose family had been among the earliest settlers at Poquonock. He maintained control of the area until 1856, when the Gardiner family purchased its rights. Until recently, Henry Gardiner of Waterford, Connecticut had retained this ownership, while leasing the lands to a prosperous Poquonock Bridge farmer, John A. Ackley. Mr. Ackley, who began leasing in 1908, lived with his family in the Winthrop house. In addition, he sub-leased other areas on the site for as many as 200 cabins and even a casino. The 1938 hurricane demolished this attempt at settlement and today, there is little evidence of their one time existence. Mr. Ackley died in 1940, but his family kept the land until 1959.

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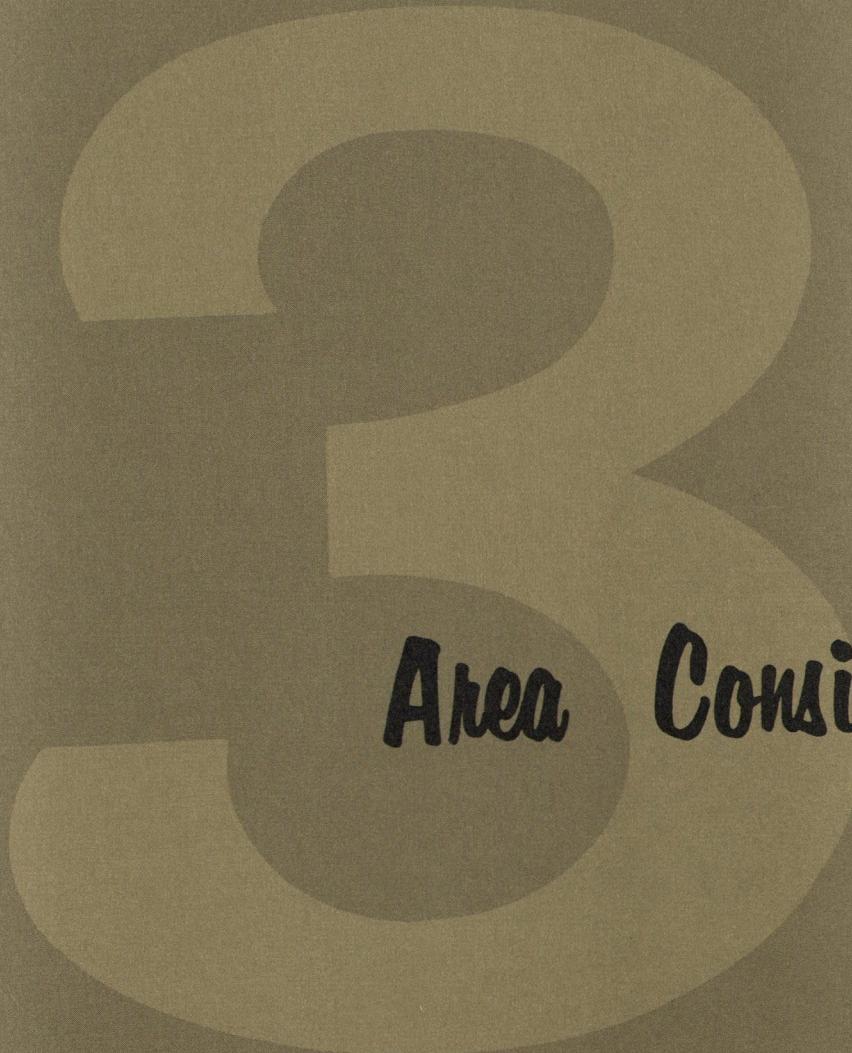
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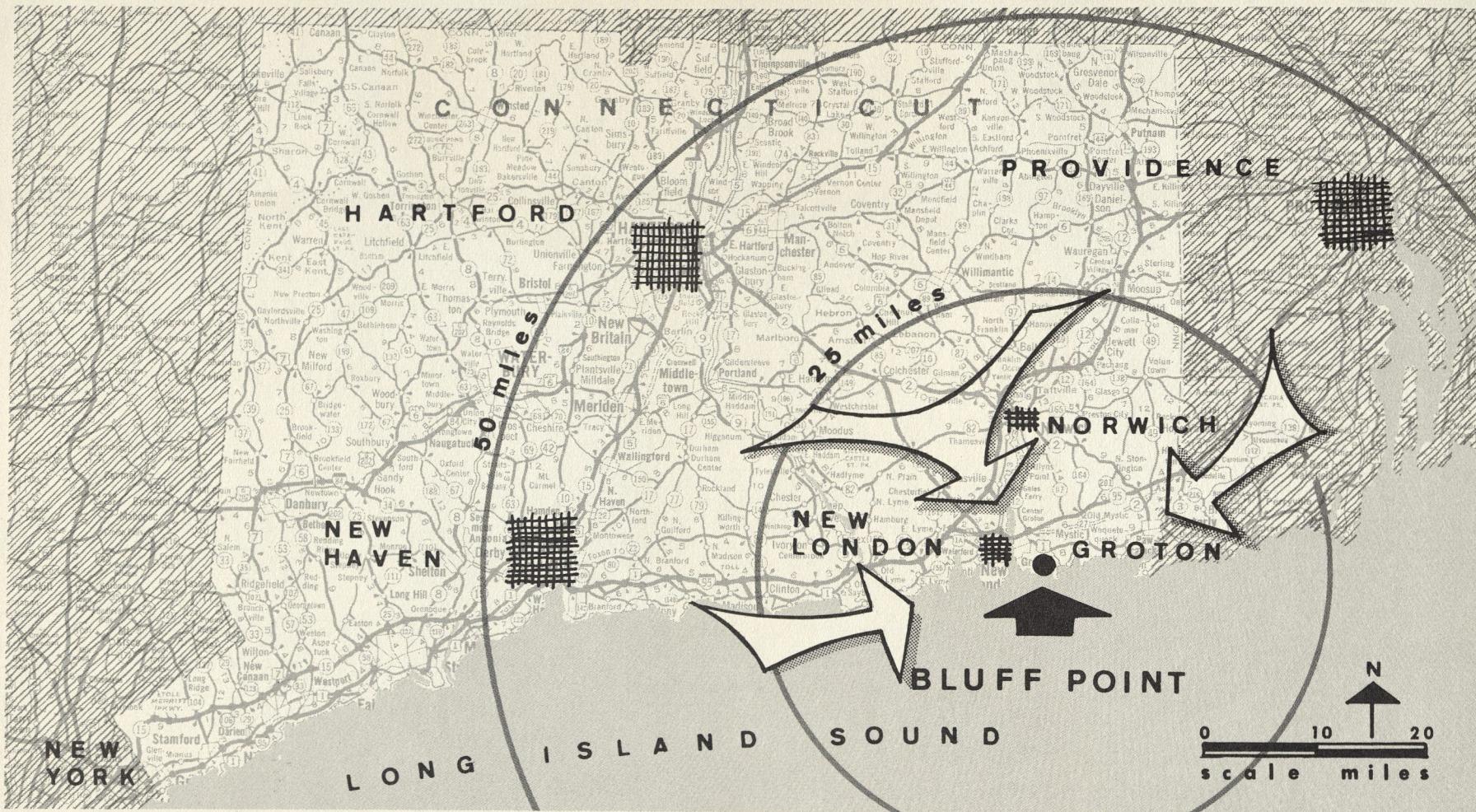
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Area Considerations



state considerations

The State of Connecticut is represented by a strong contrast in its development patterns. Highly urbanized metropolitan communities along the western half of its Long Island Sound coastline are contrasted by the more rural character of the easterly half. This State, whose population has tripled since 1900, now maintains the fourth highest population density in the nation. This concentration of activity is most clearly evident in the intensive land use extending from the New York border to New Haven and then proceeding northerly up the Connecticut River Valley to Hartford. While the major traffic arteries have previously confined themselves to this corridor, the Connecticut Turnpike and Interstate Route 95 now extend easterly to include the other population centers along the coastline. This easterly half of the coast, therefore, must now anticipate an intensification of development pressures and population growth.

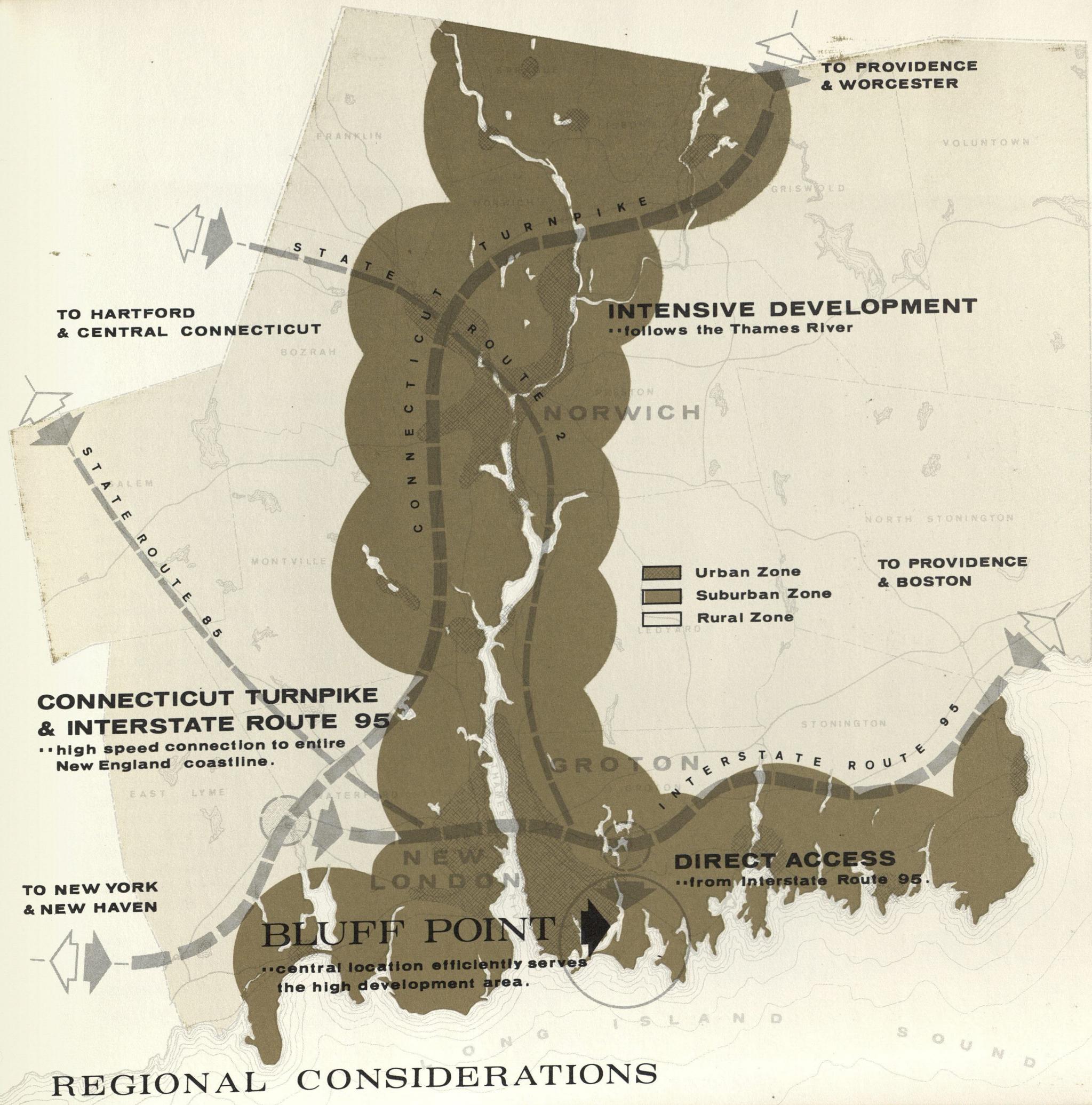
Of the State's total coastline of 253 miles, only 72 miles may be classified as beach lands. A mere nine miles of beach are open to the public. Within this category lies the

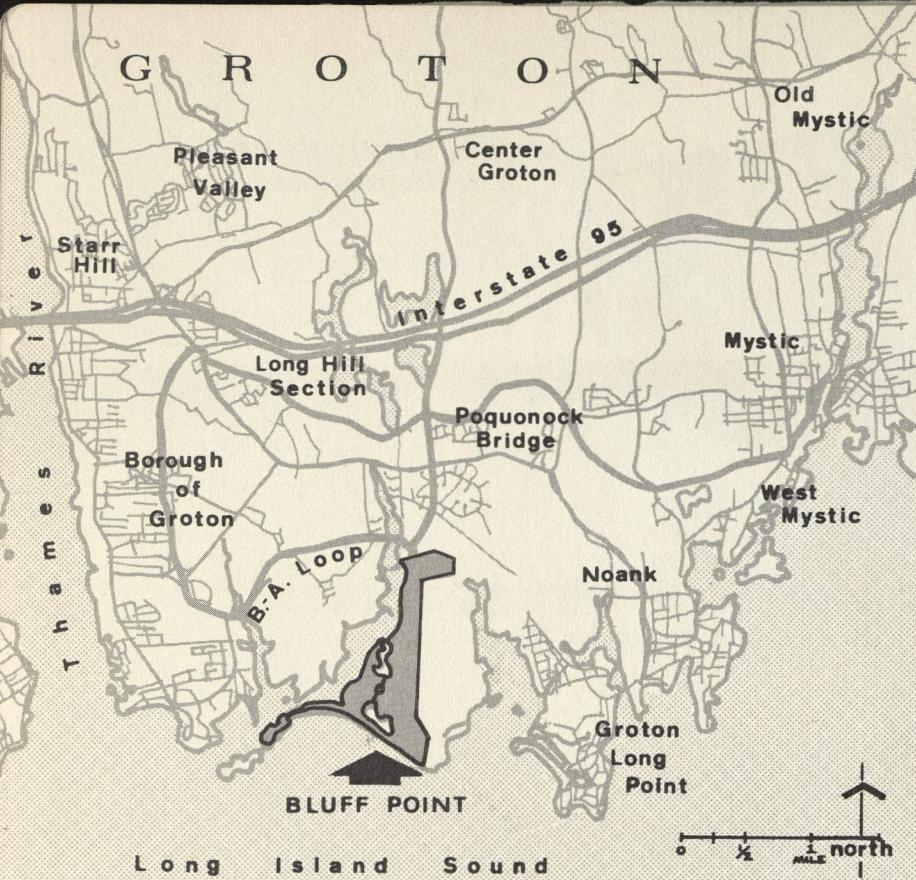
State Park system, represented by a composite six miles of beach. Bluff Point, which will provide an additional one mile of beach to this system, is well located to serve the major population centers along the easterly half of the coastline.

The surrounding region experiences population and development pressures which closely parallel that of the State. At closer look, however, we find that what gives the indication of being a metropolitan region is, in actuality, the business and population center of Groton-New London as it reflects on an otherwise predominately rural area.

The urban problems created by this area of intensive land use are, however, no less acute than those found along the westerly half of the shoreline. This is given evidence by the statement of the Southeastern Connecticut Regional Planning Agency as published in its recent regional land use study:

...the major open space needs of the region are the location of additional active recreational facilities closer to the urban and suburban areas (and) the preservation of specific natural features....





community considerations

The Town of Groton, located within the primary economic center on the eastern Connecticut shoreline, boasts of being the fastest growing community in Connecticut. Its present population of 30,000 is contained within seven square miles and is expected to become the most populated town in the region when its population doubles by the year 2000.

The primary contributors to the growth and economy of this metropolitan center have distinct military characteristics. Here are located the home bases of many of our nuclear submarines. The United States Submarine Base has grown to now include 5,000 personnel, a fourfold expansion over its World War II complement. The largest single private employer in the area is the General Dynamics Corporation. Most notably renowned for its production of the Nation's nuclear submarines, this firm maintains a peacetime labor force of 7,000 employees. Military activities of this type require a vigorous and stimulated personnel who, in turn, demand active recreation outlets as a contrast to military routine.

Found in this area are numerous indications of the enjoyment gained from water-associated recreational facilities. This is evidenced by the growth in boating facilities for the launching and mooring of marine craft. From these boats, the enthusiast may partake in the deep-sea fishing in Long Island Sound, or seek the quieter waters of the numerous rivers and inlets found in the area. Salt-water swimming, too, is afforded by the limited beach facilities of the Town. Advances in mobility given by improved highways have increased the pressures on these natural features. Provisions must be made to accommodate these anticipated demands.

Fast and efficient transportation systems are definite requirements of a rapidly growing metropolitan community. This is represented strongly in the recent master plan recommendations which were presented to the Town by the Groton Planning Commission. As illustrated in their "Groton, Connecticut, Plan of Development, 1961", a proposed loop system of vehicular arterials will provide smooth connection among the residential, commercial, and industrial sections of the city. Furthermore, this loop will have direct connections with Interstate Route 95, which soon will be the major route serving the entire New England coast. Specifically, the loop will extend southerly from I-95 to Brandegee Avenue, head easterly to skirt Trumbull Airport, and then proceed northerly to rejoin I-95, thus giving it the name "Brandegee-Airport Loop". In their Master Plan recommendations, the Groton Planning Commission proposes an extension of this loop to provide direct access to Bluff Point State Park. This ease of accessibility will provide additional incentive for the use of Bluff Point by those people from inland areas.

OPEN SPACES

" of reservoir lands can connect with natural character of Bluff Point to provide a continuous band of recreation.

GOLD STAR BRIDGE

" is the single river crossing within a ten mile distance.

DIRECT CONNECTION

" from Interstate Route 95 to Bluff Point provides easy access from entire state.

(PROPOSED) BRANDEGEE - AIRPORT LOOP

" circulates arterial traffic to all sections of the city and provides direct access to Bluff Point.

URBAN RENEWAL

" area can provide an attractive setting for entering Bluff Point.

TRUMBULL AIRPORT

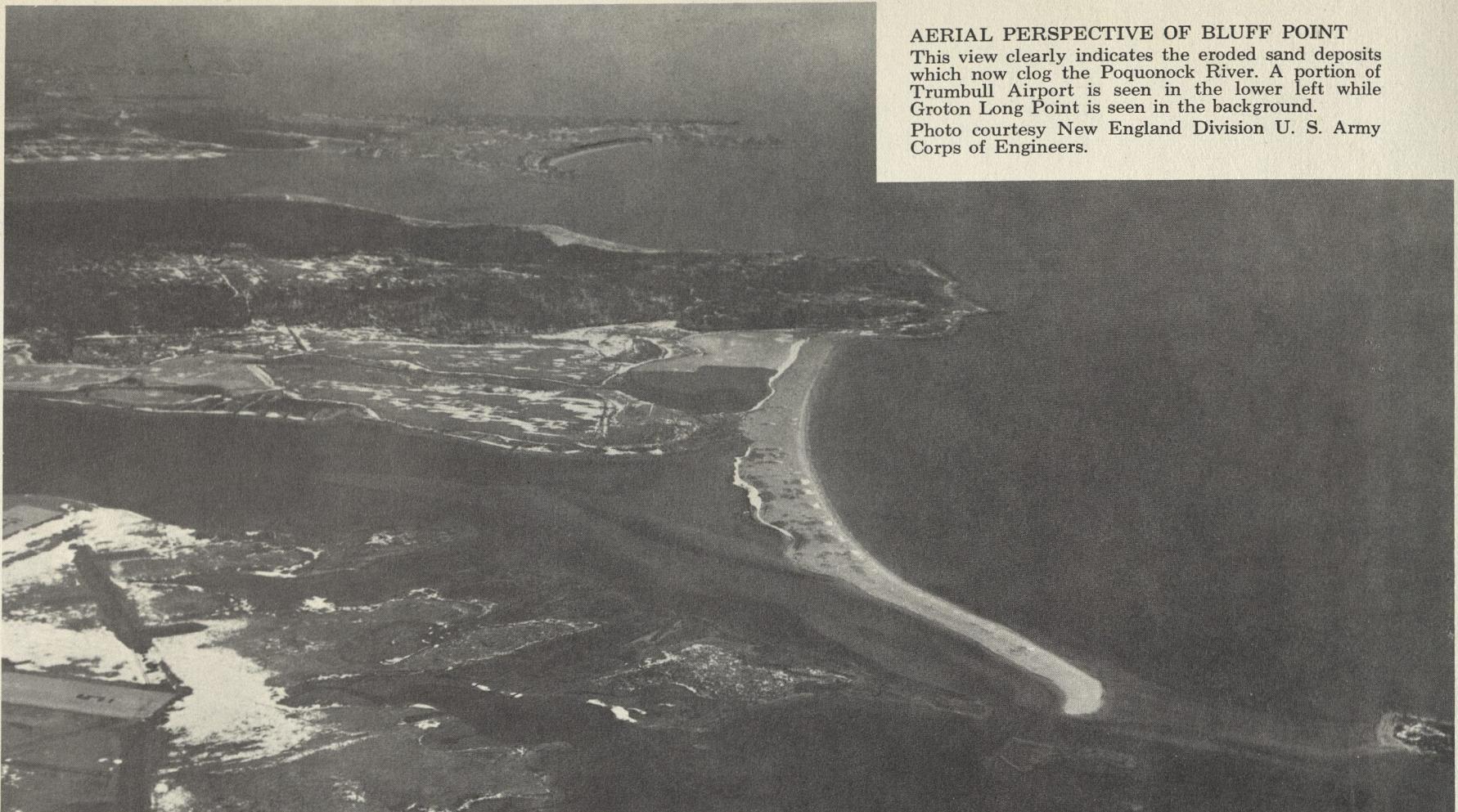
" provides assurance of open space while preventing development encroachment.

BLUFF POINT

- OPEN SPACE AREAS
- RESIDENTIAL AREAS
- BUSINESS AREAS
- INDUSTRIAL AREAS

COMMUNITY CONSIDERATIONS

Analysis of Site



AERIAL PERSPECTIVE OF BLUFF POINT

This view clearly indicates the eroded sand deposits which now clog the Poquonock River. A portion of Trumbull Airport is seen in the lower left while Groton Long Point is seen in the background.

Photo courtesy New England Division U. S. Army Corps of Engineers.

site considerations

The lands surrounding Bluff Point are clearly representative of a site whose natural conditions offer a variety of directions toward design. Within this site of 276 acres are presented the full extremes of visitor interest. Basically, it is divided into two factors: the beach lowlands, and the rocky headlands which climb the hillsides to overlook the river from a sixty-foot height advantage. These hillsides are covered with abundant vegetation; Oaks, Beech and Hickory trees provide a canopy to the smaller Hawthorns and Hornbeam. Providing further interest are the groupings of native Viburnums and Shadblow. From these hillsides, one can take in the distant views to Fishers Island in the Sound or look west to spot the historic Fort Griswold monument as it accents the Groton skyline.

Following a course towards Long Island Sound, the land slopes downward to end abruptly in a sudden plunge to the water, 35 feet below. Here Bluff Point takes its name. An early description of this feature reads as follows:

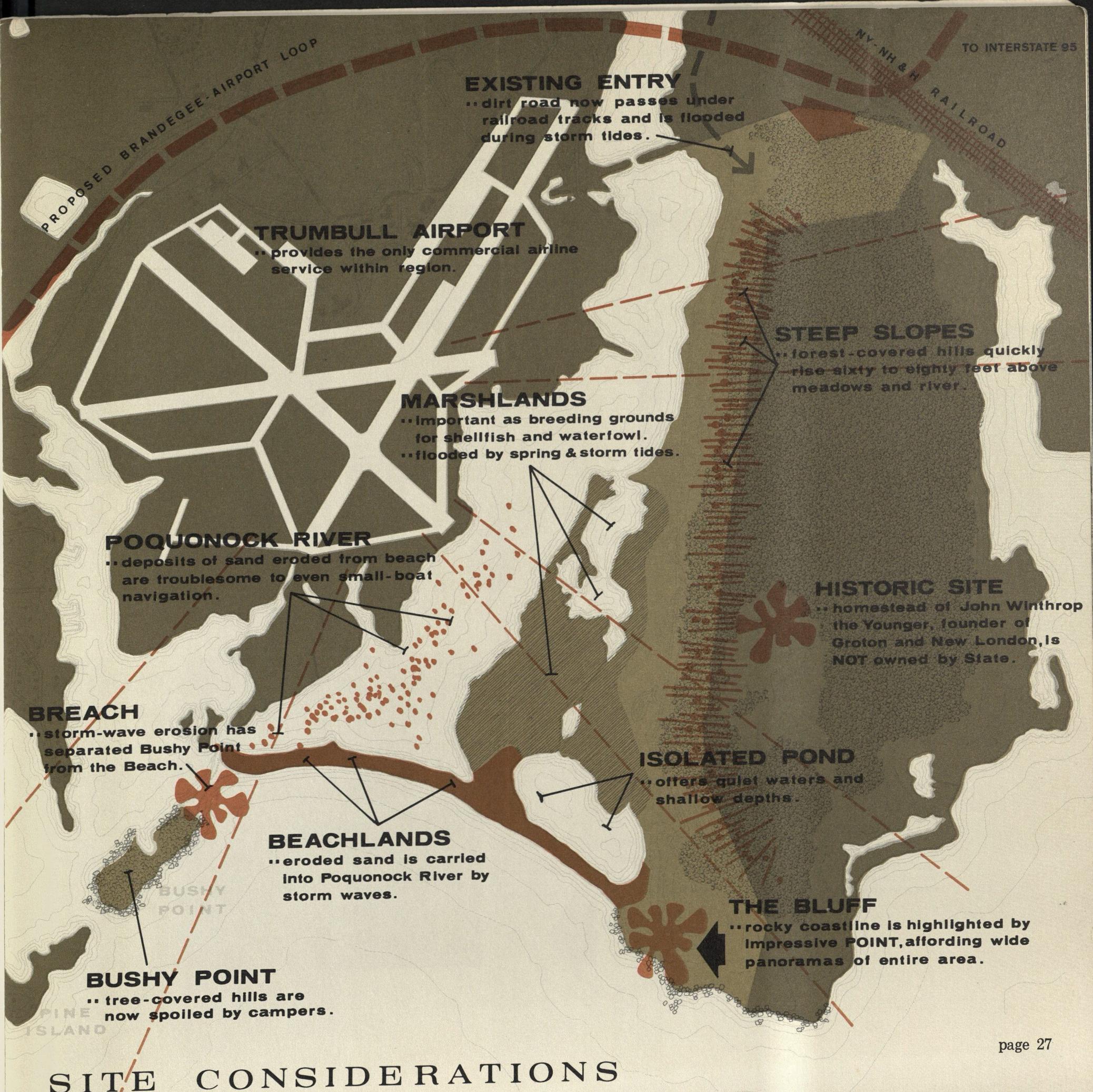
"On a day when a vigorous wind is driving large waves from the southwest, the bottom of the cliff is wreathed with the white of breaking water and provides a imposing view of rocky headland as can be found along the Connecticut coast."

Providing accent to this open protrusion of headland are

natural groupings of bayberry, wild azaleas, and sentinel-like junipers. Here, one can view the panorama of Long Island Sound as it sweeps in from the southwest to meet the gently-curving beachlands.

Stretching some 4,000 feet westward from the bluff, the beach testifies to the force of storm waves which have overtopped its gentle heights to carry valuable sand into the Poquonock River behind it. This overwash has also provided substance for a salt-water marsh and flood plain. Important as a breeding ground for shellfish, the marsh and its beautiful grasses offer a clean contrast to the adjacent hillsides.

A one-time connection between the beach and the isle of Bushy Point is now obliterated at high tide. During the ebb, one can cross this shell-covered stretch to explore boulder-strewn shores and tree-covered knolls. Unfortunately its charm has given rise to uninvited campers whose junk refrigerators and rusty bedsprings blemish its natural attractiveness. They should be prohibited. Proper restoration to its natural state will provide the visitor with an inspiring view back to the beach, the rocky headland, and its background of tree-covered hillsides which together are Bluff Point.



SITE OF HISTORIC WINTHROP HOUSE

Only the stately chimney and foundation walls remain today of the elegant 16-room house originally built in the 1700's by Fitz-John Winthrop, son of Governor John Winthrop, the Younger, founder of New London and Groton.



TREE-COVERED HILLSIDES

Native Oaks, Beech, and Hickory trees cover the hill-sides which overlook the Poquonock River and the beach areas below. Visitors gain distant views over Long Island Sound and to the Groton skyline.

ROCKY HEADLAND SHORELINE

This rock-strewn section of shoreline becomes "wreathed in the white of breaking water" when strong winds drive in large waves from the southwest.





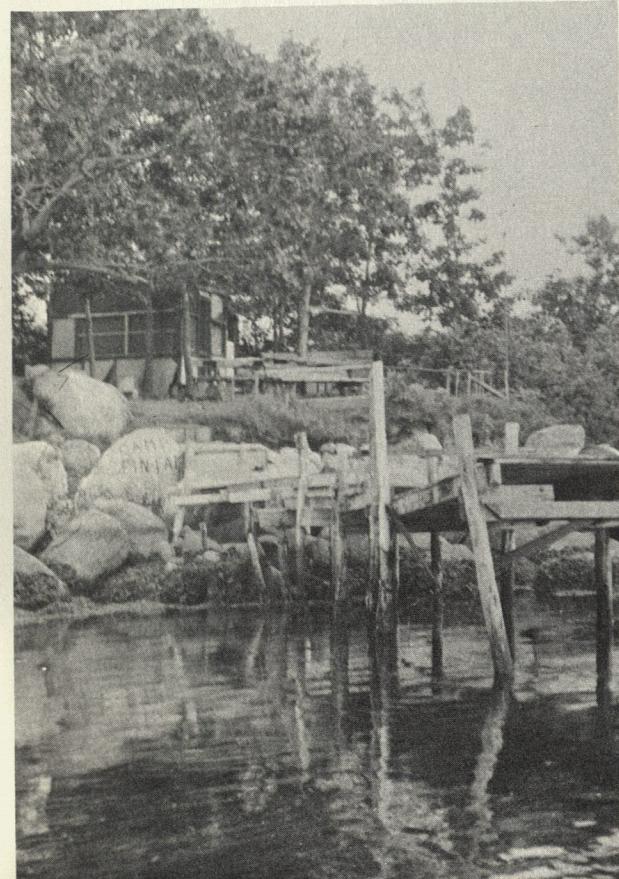
GRASSY FLATLANDS AND SALT-WATER MARSH

Important for its role as a breeding-ground for shell-fish, the salt-water marsh also provides sanctuary for many birds. The surrounding flatlands provide a clean contrast to the adjacent hillsides.



CRESCENT-SHAPED BEACH

A gently-curving beach stretches 4,000 feet from the base of Bluff Point to the isle of Bushy Point. Its natural vegetation includes native beach grasses and groupings of Rugosa Rose. Storm waves carry away valuable sand as they wash over its top.



UNINVITED CAMPERS ON BUSHY POINT

The natural charm of this delicate island has given rise to uninvited campers whose lack of consideration and discarded rubbish now spoil its character. Restoration can reclaim its inviting beauty.



general site conclusions

Development of any kind at Bluff Point must necessarily consider the problems presented by the site conditions. Analysis and evaluation of these conditions is necessary to determine those design directions which will best retain and enhance the natural character. Therefore, a basic understanding of the existing site problems is requisite to the further development of a design concept; i.e., we must first agree on *WHAT* must be solved before we can discuss *HOW* to solve it.

(1) **BLUFF POINT STATE PARK SHOULD CONNECT WITH REGIONAL AND STATE HIGHWAY SYSTEMS.**

To efficiently serve the people of Connecticut, ease of access is necessary to avoid interference with local street systems. In addition, since many visitors will probably be unfamiliar with the local area, routes leading to the park must be simple and most direct.

(2) **ADDITIONAL LANDS SHOULD BE ACQUIRED ADJACENT TO BLUFF POINT.**

While the present lands will help provide for immediate demands, these same requirements for more recreational land will rise quickly again. Furthermore, an insensitive use of the adjacent lands could seriously harm the character of the Bluff Point Headlands. The historical Winthrop House and Site should be brought under State ownership and preserved as a landmark within the park.

(3) THE NATURAL CHARM AND CHARACTER OF BLUFF POINT PROPER SHOULD BE MAINTAINED.

Development around the cliffs at Bluff Point itself should be kept to a minimum to preserve views, natural vegetation, contour, and scale of this geological feature. Presently, the erosive forces of storm waves continue to destroy the area. Studies should be taken to determine an appropriate method of stabilizing these rocky headlands and insure the preservation of their attractiveness.

(4) THE EXISTING BEACH AREAS SHOULD BE STABILIZED AGAINST PRESENT EROSION.

One of the most attractive and unique elements within a shoreline park is its beach. Because of this importance, it is essential to assure the preservation of such lands for future developments. Storm waves now carry away valuable sand into the Poquonock River. This deposition is also detrimental to even small boat navigation. Placement of hydraulic fill should build up the beach elevation to ten feet above "mean water level" of Long Island Sound.

(5) LOW-LYING AREAS BEHIND THE BEACH SHOULD BE RECLAIMED FOR DEVELOPMENT.

This area covers 50 to 60 acres and is wholly or partially flooded during storms and spring tides. While some of these areas are valuable as breeding grounds for shellfish and waterfowl, most are unusable wetlands which should be reclaimed.

(6) POQUONOCK RIVER SHOULD BE SELECTIVELY DREDGED TO IMPROVE NAVIGATION AND RECREATION.

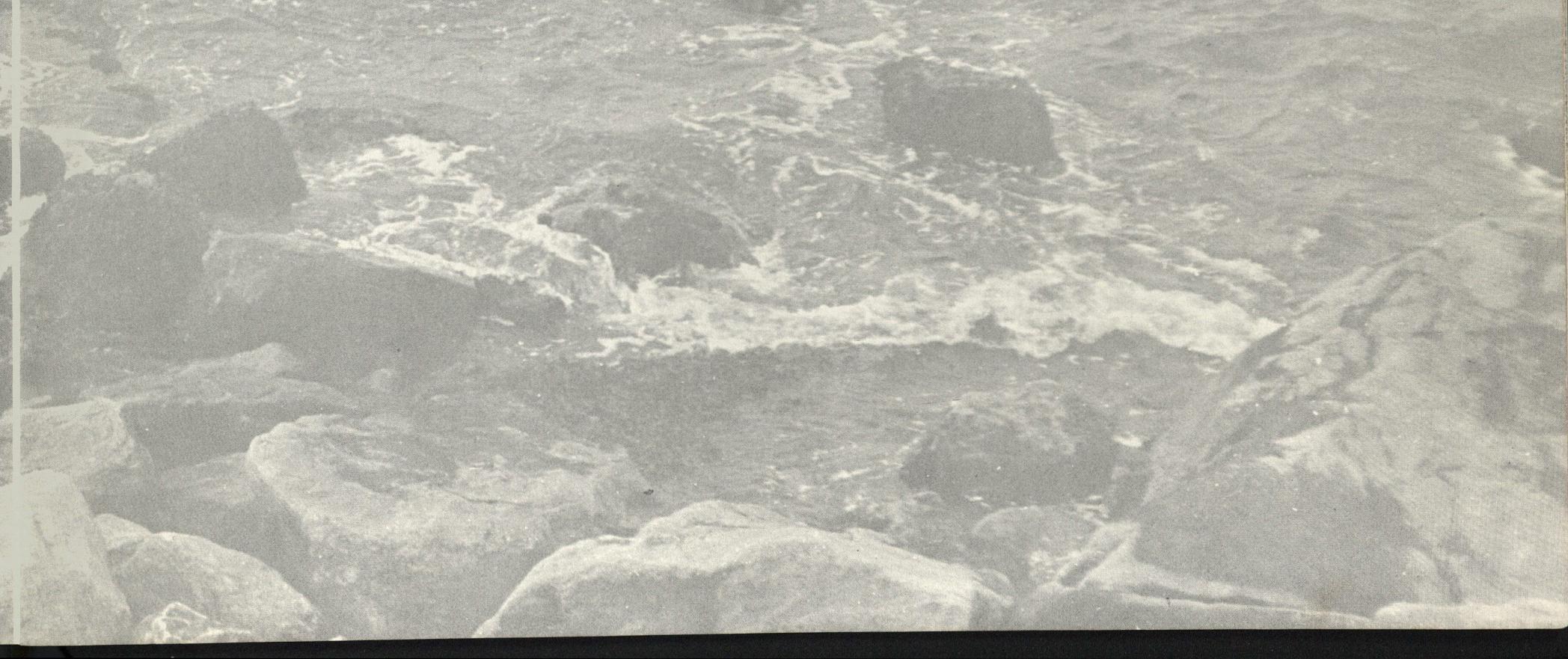
Because of its immediate proximity to the site and its increasing potential for recreation, it is important that this feature be considered as a necessary portion of the park. Since even small boat navigation is now difficult, dredging could not only improve its depths, but also provide hydraulic fill required for beach stabilization and buildup of wetlands.

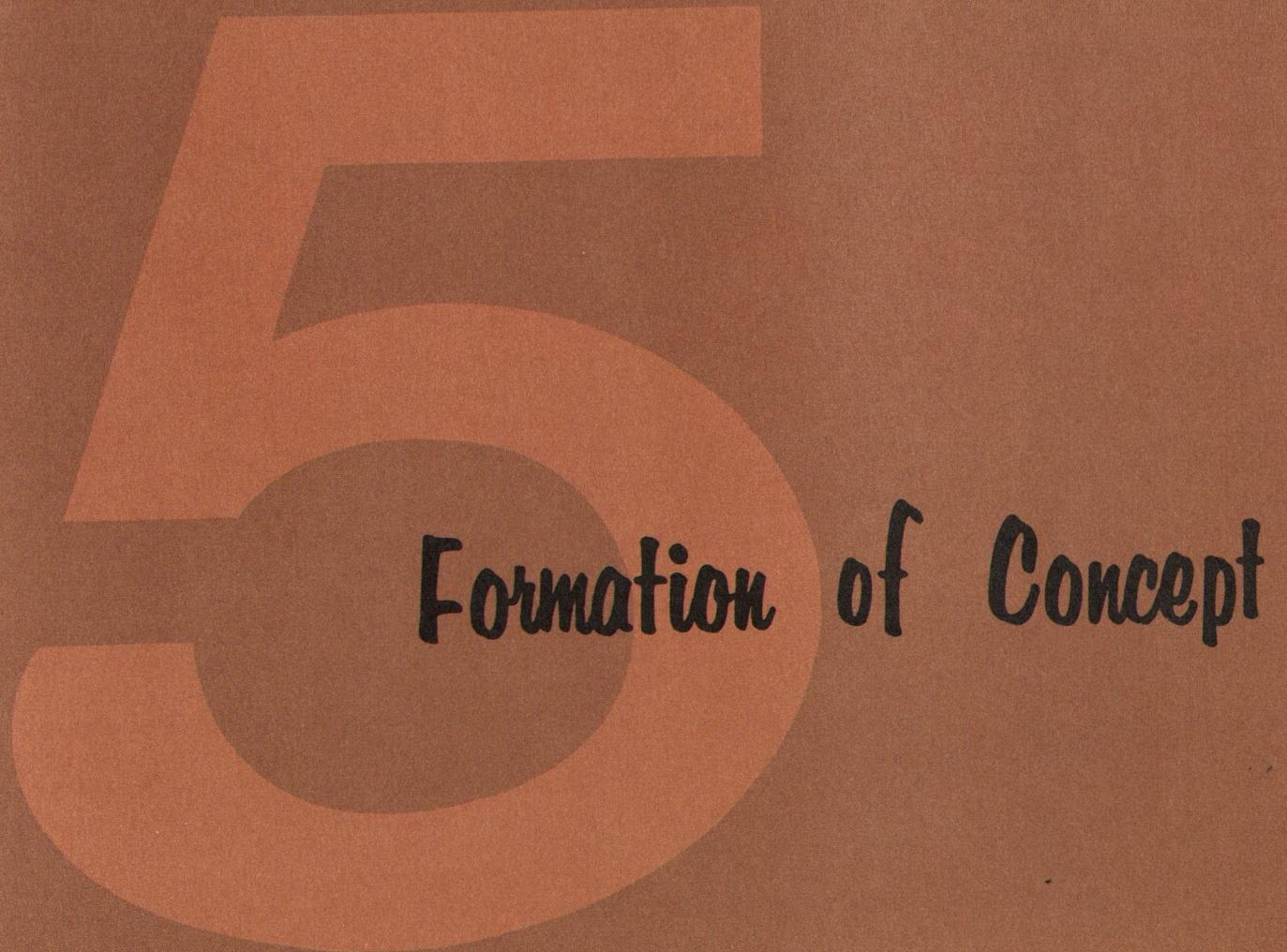
(7) EXISTING SHELLFISH AND WATERFOWL BREEDING GROUNDS SHOULD BE PROTECTED.

Located approximately central on the Poquonock River frontage, this area of from 30 to 40 acres provides marshland and shallows valuable to the protection of waterfowl and breeding of shellfish. Rapidly decreasing along the Connecticut shoreline, these areas are important in maintaining the natural species of wildlife unique to shoreline areas.

(8) BUSHY POINT SHOULD BE RESTORED TO ITS NATURAL CHARM.

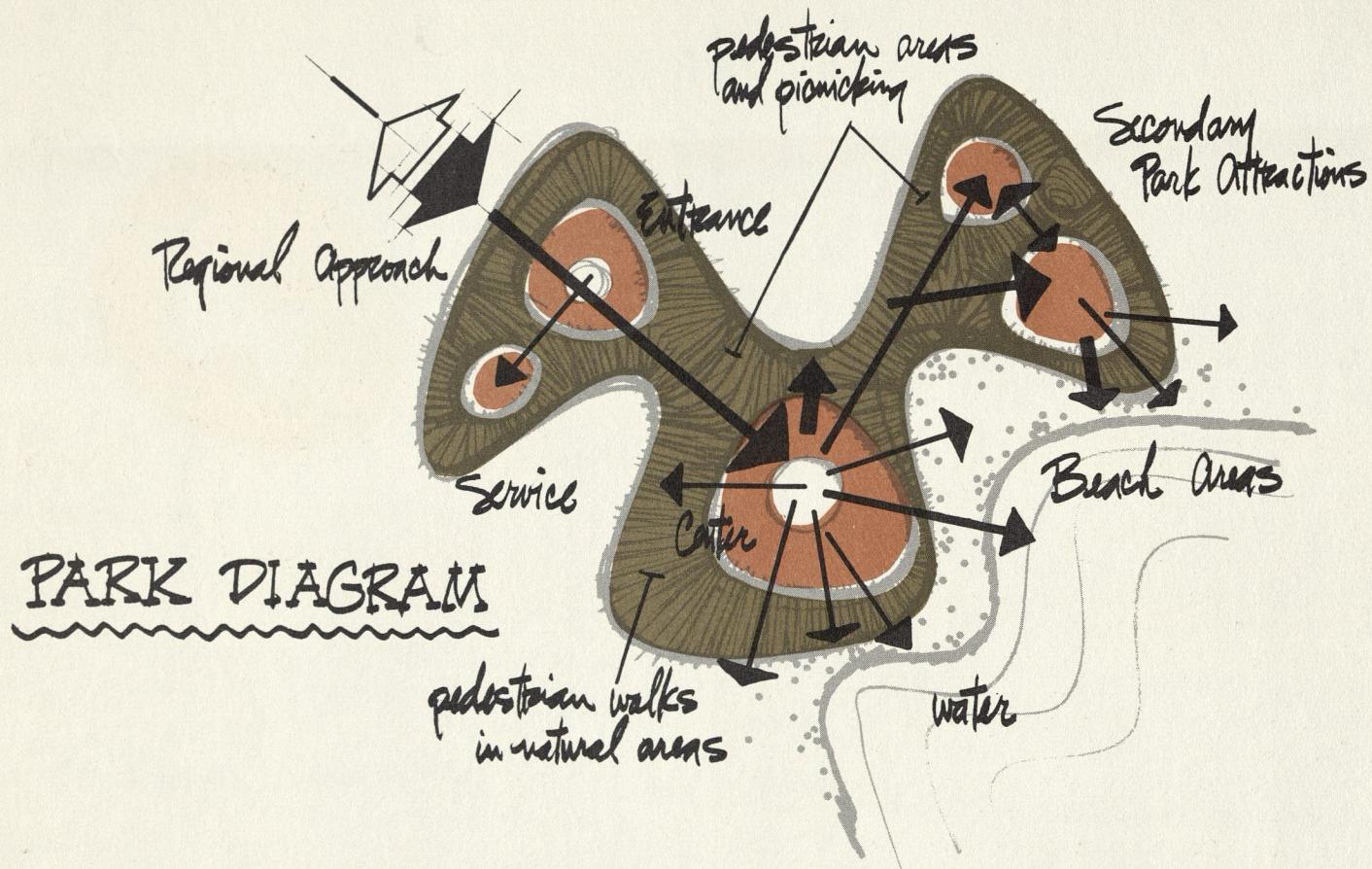
Currently "uninvited" campers spoil the character of this delightful area by discarding piles of junk, bed-springs, refrigerators and building shacks which further desecrate its gently rolling knolls. Immediate control and elimination of these people is needed to halt the damage now being caused.





5

Formation of Concept



design goals

In the design of any park area, one must be familiar with the basic and underlying OBJECTIVES which are to be represented by the final design. Without this sensitivity, it is difficult to fully evaluate the degree of success which the designer has expressed in his plan.

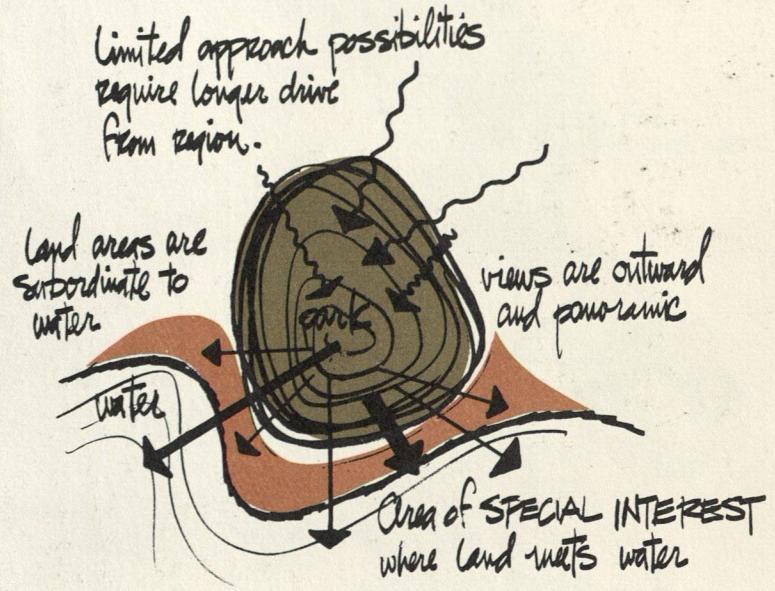
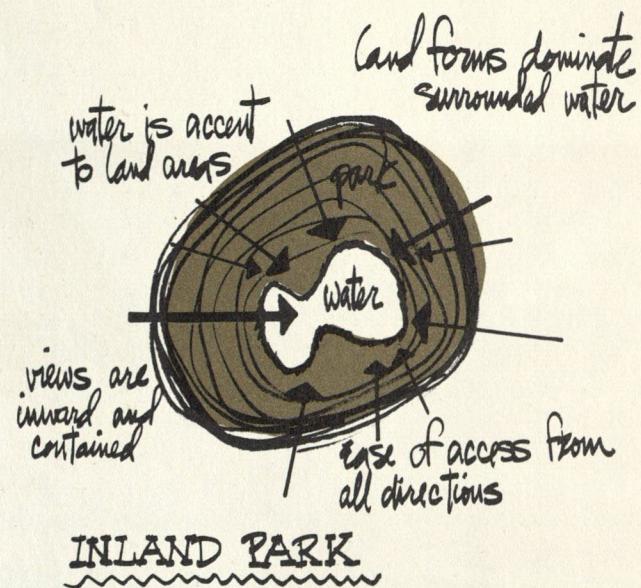
A shoreline park is, by its very nature, different from an equally-sized area located inland. While each parcel may contain the same elements of water, beach, trees and hills, each is depicted differently as its location changes. Fresh water inland lakes which are themselves held in containment and framed by the land give way to the reverse at a shoreline park. Here it seems that the LAND is clinging to the edge of the more dominant water, thereby giving a much different sense of scale and proportion. Trees and plant materials, too, are seen to be different at the shore. Because of the presence of salt-spray, many species which are in abundance further inland have disappeared and been replaced with a more rugged, twisted, and hardy variety.

Here are seen the beach grasses and swamp growth which mark the very beginning of plant ecology. Continuing from this foothold in the sand, the plant material carries into the deeper root systems of white pine and junipers; then into the soft woods, and finally ending in the climax forests of oaks, beech, and hickory trees, which dominate the upper hillsides. Basically, things are just different at the shore. The beach yields hours of enjoyment to the visitor who merely walks along and looks down. Strange shells, bits of driftwood, "funny-looking" weeds, a vacant lobster claw, and a polished and rounded stone which "must be valuable" are typically found along the shore. Tides are not seen on inland lakes, but at the shore, they testify to great things not controlled by man. One can see from this brief list that designing on a piece of land must be more than just a shape. It must fully recognize the inherent qualities of that SPECIFIC piece of land and what it represents.

Equally important as the understanding of the unique qualities of the site, is the awareness of special visitor requirements. Here again, visitors to a shoreline park must be provided with certain qualities which are proportionately less important in parks of different location. A simple diagram can show that while an inland park can draw from all directions for its visitors, a shoreline park is much more limited. Able to be approached from only half the directions of the inland area, the shoreline location must, therefore, require a greater distance, to be reached by the same number of visitors. This longer travelling distance translates into a greater need for efficient and direct highway systems leading to the park. Furthermore, since it is a longer trip, families are less apt to take "spur of the moment" drives to the beach. More likely, the visiting family will plan in advance and "make a day of it".

This then, means that since their stay is longer, they will, in turn, either bring more things with them or plan to buy food, suntan lotion, etc., while at the park. In addition, a longer visit will require a greater variety of experiences to keep them interested. Not content to lie on the beach for the entire stay, a well-designed park should provide areas for further exploration such as nature trails for pleasant strolls, picnic areas for families, and open space for informal games. Furthermore, the park could contain interesting displays depicting things unique to the shoreline. Panels telling of the geological formation of the area, history of the inhabitants, a board "all about sea-gulls", and shoreline plants could be the basis of an interesting afternoon at the shore.

It can be seen, therefore, that a shoreline park should be designed to most fully take advantage of the fact that this area is truly "AT THE SHORE". Presentation of those qualities which differentiate the area from all other inland parks should be primary in expression along with the sensitivity of providing for the special requirements of the visitors.



Concept Conclusions

improved boating on
Poquonock River

preservation of
wildlife areas

boat launch utilizes
quiet waters and widening
in river.

Entrance connects with
Brandegee-Airport Loop.

preservation of slopes
and wooded areas.

BUSHY POINT

beach areas connect to
improved Bushy Point.

Bluff Point remains
dominant along headlands.

incorporation of
Historic Site
into Park.

application of theory

A sensitive evaluation of those factors both existing and theoretically possible will present certain combinations of criteria upon which a design concept can be intelligently formed. Adapting this concept to the site forms the Land-Use Concept, which is the skeleton upon which detailed design must be based. Because of this relationship, agreement must first be reached on the Land-Use Concept before the validity of any detailed design areas can be shown. In the formation of a design concept for this Park, the following conclusions are held to be salient:

(1) THE BEACH IS THE DOMINANT ATTRACTIVE FORCE WITHIN THE PARK.

The development of this area, therefore, should reflect the greatest degree of ARRIVAL and TERMINUS. In providing this, it will require the highest intensity of development within the Park and consequently the strongest statement of "MAN-MADE". Due to its importance, it should depict a recognizable CENTER from which other visitor elements are subordinately reached. It is the stopping of vehicular travel and the beginning of pedestrian.

(2) BLUFF POINT HEADLANDS AND THE HILL-SIDES SHOULD BE PROTECTED AGAINST DEVELOPMENT.

These lands are valuable in representing the historical, undeveloped Connecticut shoreline which is quickly disappearing. It is recommended that additional headlands be gained to further protect those which are now owned since adjacent lands are now ripe for encroaching development. Furthermore, development on sloping terrain such as this usually carries with it the requirement for extensive clearing and regrading which would quickly destroy its inherent charm.

(3) A NATURE PRESERVE SHOULD BE ESTABLISHED TO PROTECT AREAS VALUABLE AS SHELLFISH AND WATERFOWL BREEDING GROUNDS.

Necessary in the maintenance of a shoreline environment, these areas are also potentially attractive to visitors and educational groups. They further portray the unique elements found along the shoreline and insure their presence for future visitors. Essential here is the preservation of a naturalistic character.

(4) VEHICULAR CIRCULATION SHOULD BE SIMPLE AND DIRECT, LEADING PRIMARILY TO THE BEACH.

Since most visitors will have been riding for an extended time, they will be most anxious to arrive and

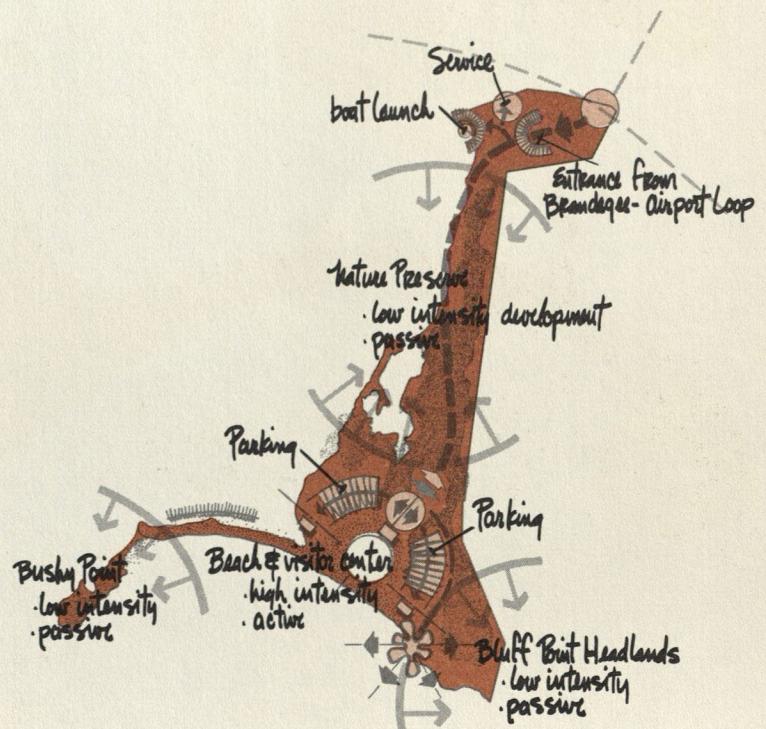
begin their enjoyment of the park. For this reason, directions to the respective parking areas should be evident and simple. In addition, since many families will tend to arrive and leave at the same time, these peak movements must be handled efficiently.

(5) PARKING SHOULD CONCENTRATE AT THE BEACH AREAS AND BE KEPT SUBTLE IN CHARACTER.

While parking must be placed as closely as possible to its respective area, it must also be tasteful in appearance. Mounds with planting should be used to screen long views of parking areas and the use of hard-surfaced paving should be restricted to only those areas of intense parking use. Informal parking under the trees can facilitate natural area usage and avoid unsightly parking lots.

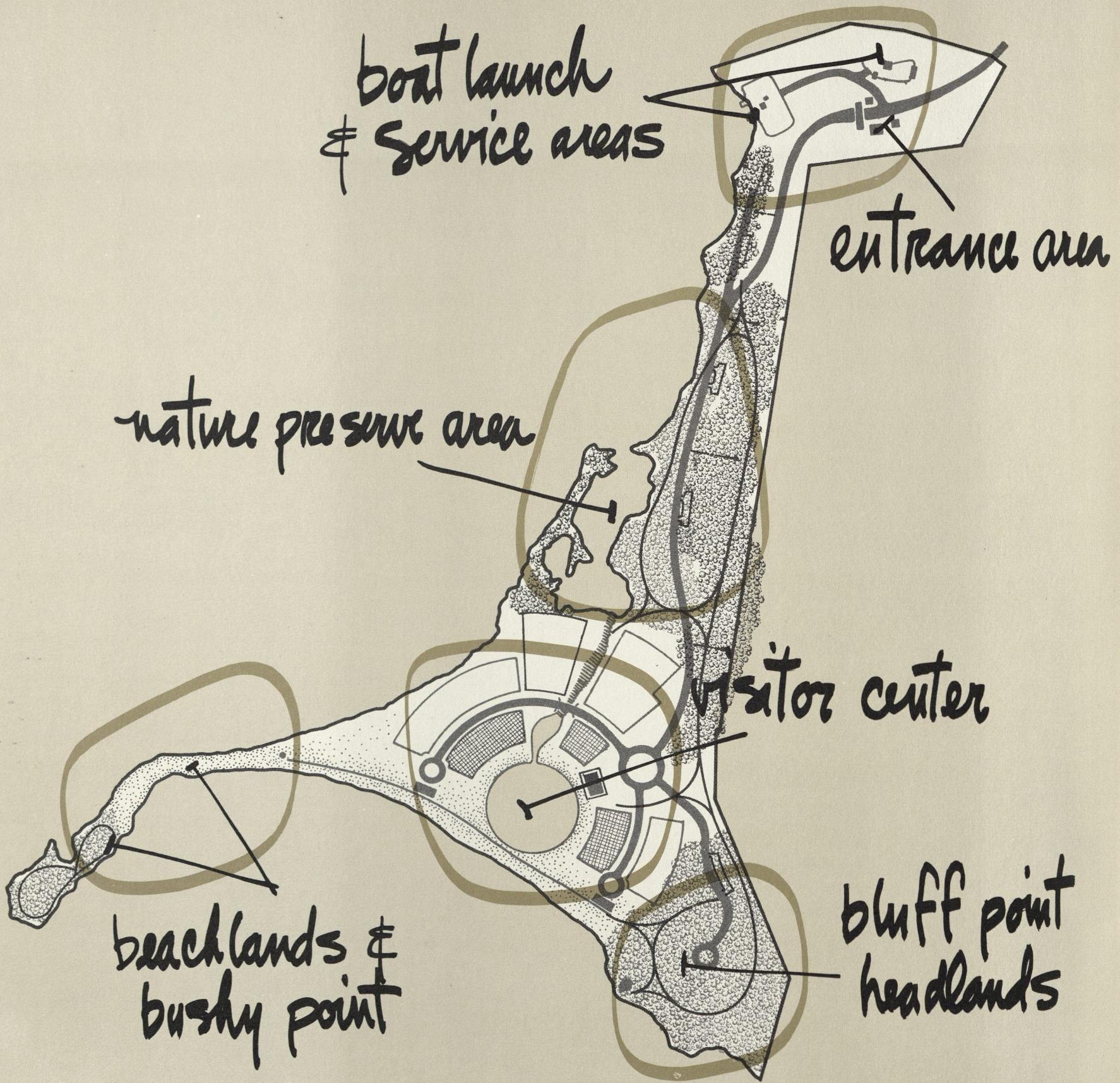
(6) PEDESTRIAN CIRCULATION SHOULD CONNECT THE INDIVIDUAL AREAS WITHIN THE PARK.

Because of the extended length of visit by families, the requirement for a variety of interests can be met by pedestrian walkways. Kept intimate in character they can lead from the shaded picnic areas to the wide panoramas of the Headlands and then carry down to the Beach.





Design Applications and Recommendations



design applications and recommendations

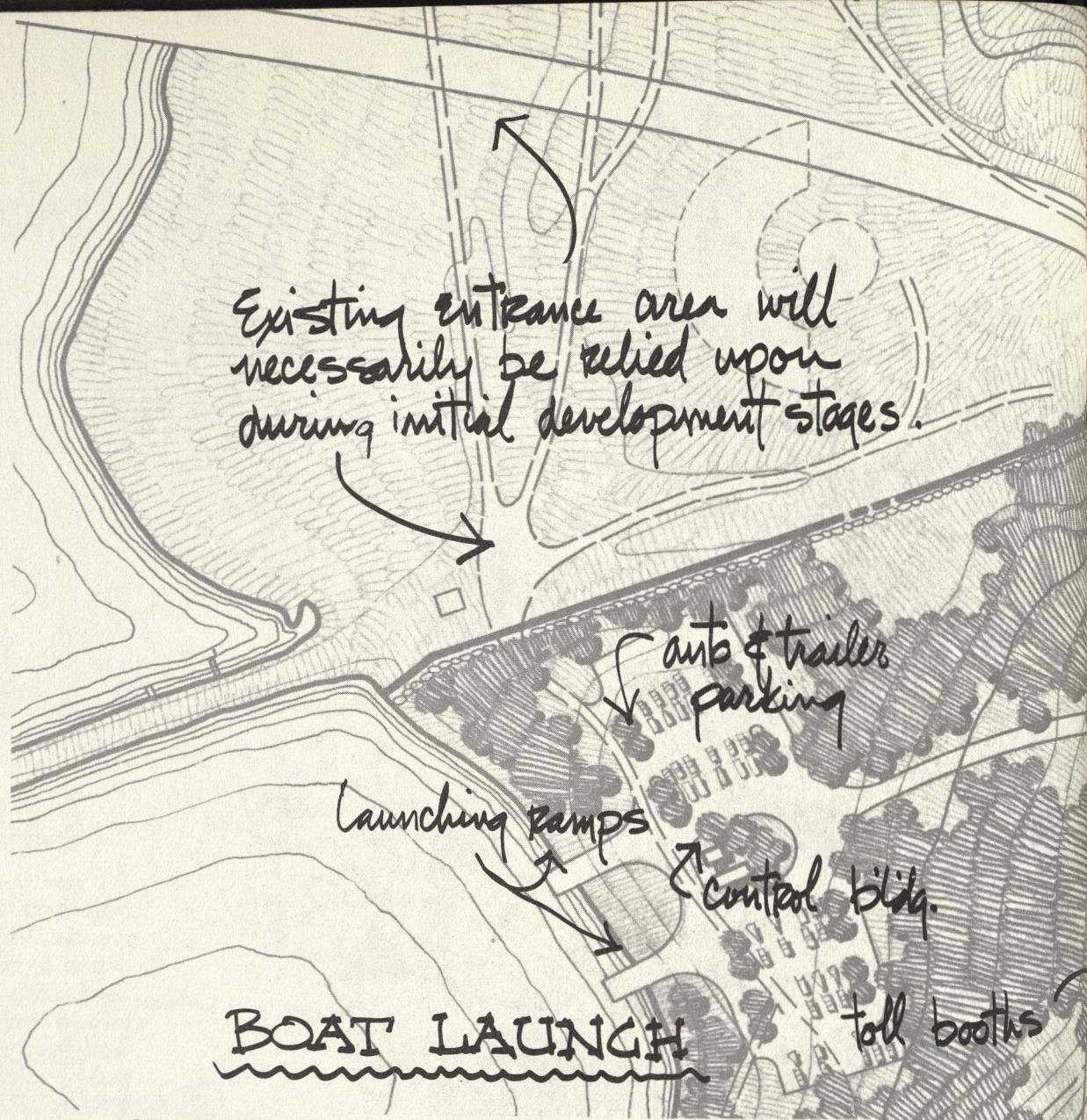
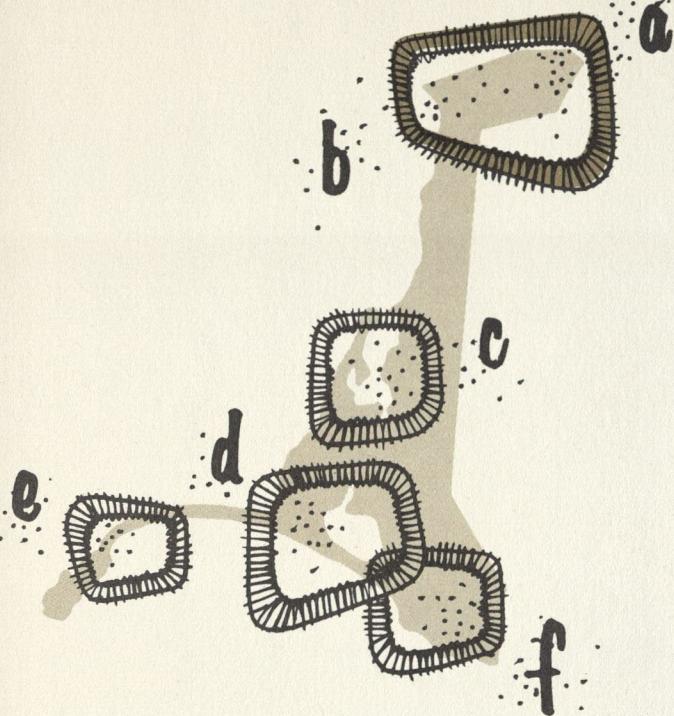
The earlier portions of this study have been primarily concerned with the documentation of the considerations and methods used in formulating the concept of site development. Simply stated, they are represented by the following:

- (1) *An examination of EXISTING SITE CONDITIONS and their tendencies for direction.*
- (2) *The analysis of those BASIC DESIGN PRINCIPLES which must be the foundation of any park of this scope.*
- (3) *CONCLUSIONS & RECOMMENDATIONS of those criteria which combine aspects of both of the*

above considerations and allow for the most effective development as related to this specific site.

We now look at the methods of physically attaining the best combination of these physical and theoretical elements. It should be strongly pointed out that the presentation of these conclusions and recommendations must be used solely as GUIDE PRINCIPLES and not necessarily as patterns of exact physical design. Although the adaptation may vary in style by the individual translation of future designers, the basic structure of these GUIDE PRINCIPLES must be represented.

This section is, therefore, an APPLICATION of the site-oriented principles in terms of specific physical design.



BOAT LAUNCH AREA

With the increased popularity of this sport of boating, the launch area fulfills an important part of a shoreline park. Essential to its success is simply how efficiently it performs its function. Design criteria should well respect the additional space required for the maneuvering of a boat trailer and also its parking space.

A well-designed launch area will also recognize the fact that most cars are left here for the better part of the day; therefore, the provision of ample shade trees would furnish cool locations for auto parking and a restful retreat from the beating sun.

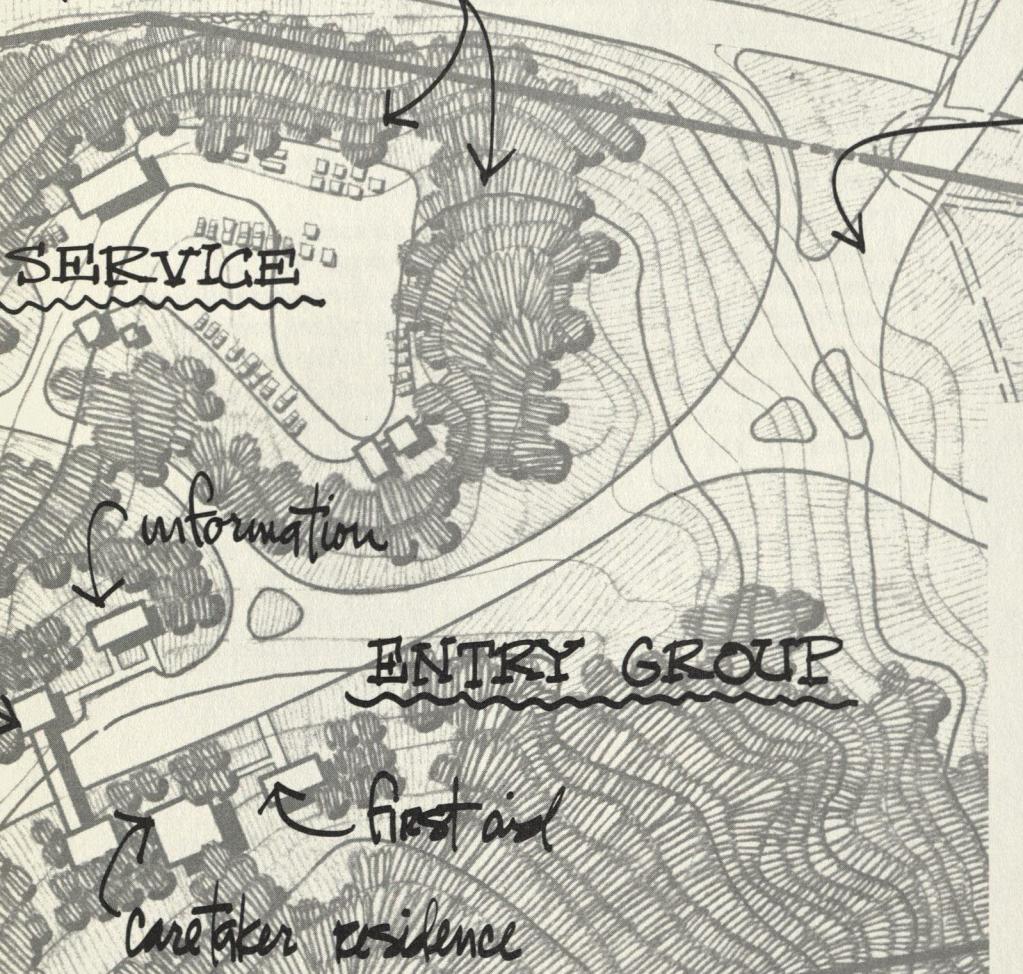
Structure requirements of this boat launch area would include storage, control, first aid, limited concessions, and in the early stages of park development serve also for the resident caretaker. These buildings should follow the intent of a simple yet tasteful style of architecture that is carried through the park. Any grading for these buildings or the parking areas should avoid unnecessary disturbance of the existing topography and plant material.

SERVICE AREA

Until producers of maintenance equipment decide to concentrate on beauty rather than brute force, service areas will carry with them an inherent requirement to be screened from the public view. The location for the service area of this park has recognized this requirement and its partner of open space. Approximately two acres have been devoted to this function to anticipate growth of the park in future years.

Areas for the storage of vehicles and equipment should locate these elements behind mounds which have been created by the grading which they require on this sloping site. The addition of native plant materials will visually soften these mounds and provide added screening to the vehicles behind them. The storage buildings should be painted to blend with the landscape and be kept minimal in size. Here again, the consideration of limiting views to the area is a major objective.

Mounds and planted buffers are necessary to segregate service facilities from the general view



"Poquonock River Parkway" panoramic views down the river are offered within this area.

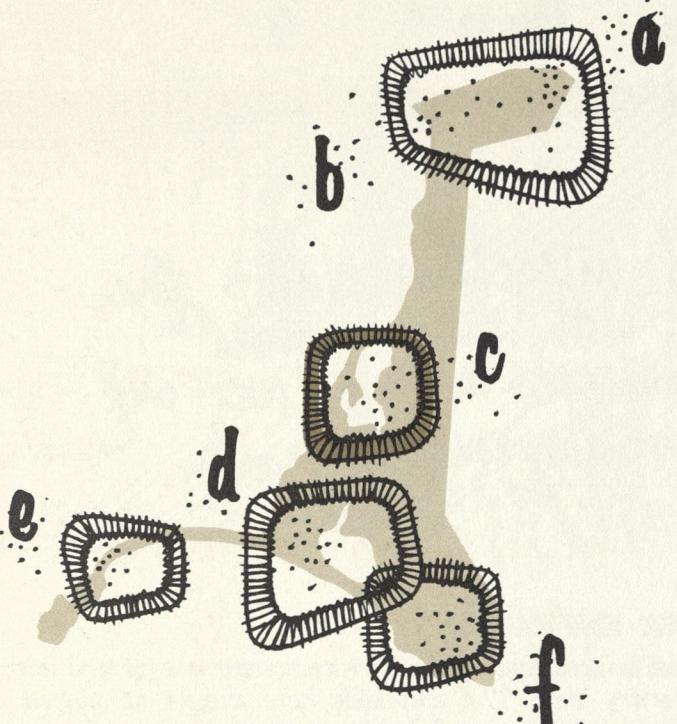
Road interchange links the park with the proposed Brandegee-Airport Loop and Interstate routes.

PARK ENTRANCE

Initial impressions of the park character are formed within the entry area. The emphasis here should be placed on portraying the natural beauty and topographical interest of the original site. The structures comprising the entry group should be a complement to the undisturbed setting. Subtlety in their design, setting and scale will begin a theme of conservative usage for the natural amenities of the site. Incorporated within the entry group should be the actual entry control facilities, an information location, space for staff office use, first aid, storage, and housing facilities for a resident caretaker. The caretaker's residence in this location would provide a maximum of direct supervision and a minimum of required servicing during months when the park is closed.

Since a considerable number of visitors arrive prior to the actual opening time of the park, provisions for this accumulation should be handled by their separation into multiple lanes of entry. This will allow an ease of regulation during peak hours or when park use is at its maximum. This additional width would also facilitate the possibility of turning around and convey a more impressive image to this area.

As a general objective, the entry area should concentrate on an attractive image. Service and staff parking should be located well out of sight and any grading should offer the least disturbance to the original topography. The use of attractive plant material should highlight this area, combining native species with a tasteful display of chosen flowering varieties. Finally, attractive, legible, and well-lighted signs should direct the visitor efficiently to his desired portion of the park.



NATURE PRESERVE AREA

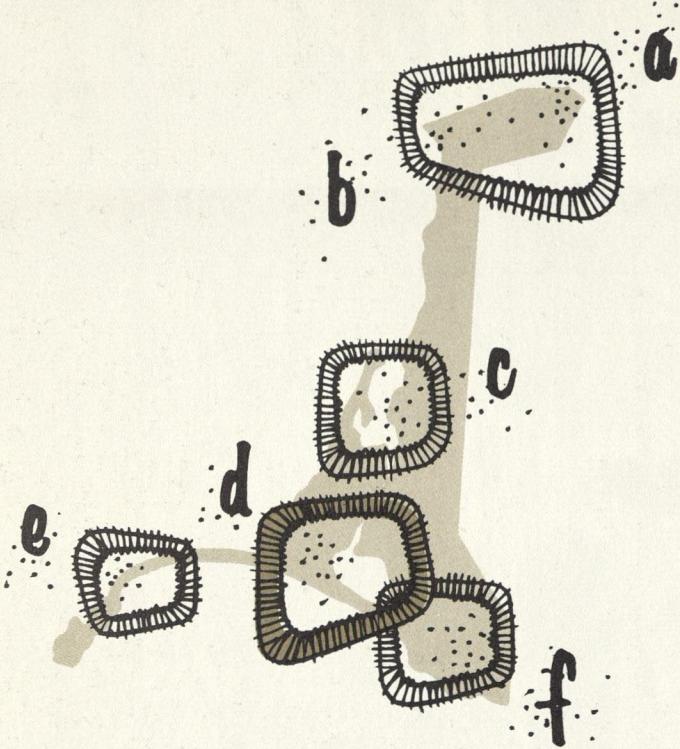
The emphasis here should be, as its name indicates, on a preservation of the natural condition of the site. While some measure of this intent is also given to the other areas within the park, its strongest reflection should appear in this section. The automobile here descends the slopes to skirt along the edge of the forest. Long, smooth vistas carry over open, grassed meadows to offer contrast to the more restricted views within the forest.

The development of this area reflects its somewhat transitional role in that the elements are arranged to portray a passive character. A dominant element is the re-established waterfowl area. Here, the natural brush offers protection to migrating and resident species of birds, while the shallow waters provide breeding grounds for shellfish. Informal pedestrian paths meander casually through this area highlighted by the occasional resting spot with its tasteful displays describing the significance of that natural area. Limited picnicking is found on the slopes from where the panorama of the Poquonock River is beheld. The parking is subtly placed away from the view of the "Poquonock Parkway." Any regrading required should return quickly to the existing topography to avoid a mechanical look and to preserve natural plant material.



Section through Nature Preserve Area





VISITORS' CENTER

Dominant in expressing the presence of man in this park, the Visitors' Center forms the core of activity and organization. Here, where architectural expression is its strongest, the emphasis shifts to portray the intensive use generated by the meeting of beach and surf. Here, also, are parked the 5,000 cars which brought the visitors.

Of the three structures forming the architecture of this area, one is given added emphasis by containing the administrative quarters of the park. It also contains colorful displays depicting the historical and scenic values of the park and southeastern Connecticut. Concessions and equipment rentals are centralized here along with a broad promenade from which one can sweep the panorama of the beach area. The two smaller structures serve in a subordinate manner and contain changing facilities and concessions for a more efficient utilization of the beach lands. In addition, they play a dominant role in the stage construction of this area.

A controlled swimming area is formed by the reshaping and dredging of the existing inland pool. This feature will be supported by the tide fluctuations, since it is directly connected to the Poquonock River via the nature preserve area. This tidal channel will also provide an interesting and attractive part of a wide pedestrian corridor which links the Visitor Center to other portions of the park. In addition, this pedestrian walkway forms a pleasant and comfortable link between parking and the beach. As indicated on the plan, the parking areas should be separated into convenient parcels through the use of mounds and plant material. This not only reduces their apparent size, but is effective in the staging of their construction.

Paving materials should represent a solid all-weather surface ranging from bituminous applications to stabilized grassed areas. Here again, the introduction of plant materials for shade will greatly increase its enjoyment by the visitors.

Grading for the area is determined, to a great extent, by the destructive force of storm waves. For this reason, the pavilion areas should be at least ten feet above mean water level of the surrounding waters. This added height will also aid in conveying their design importance. The parking areas will remain at the lower elevation of approximately six to eight feet above water level. Substantial fill which will be required for the development of this area should be acquired in conjunction with dredging operations now under study for this area by the U. S. Corps of Engineers.

In general, therefore, the Visitors' Center forms the architectural, administrative, geographic, and activity center from which the other elements of the park radiate. The visual impression of the area is one of order, dominance, activity and, above all, beauty.

Grassed parking areas, used to handle peak crowds, offer open space during times of low demand.

"BEACH BOULEVARD"

Parking areas are paved in high-use areas. Planting added to screen views and provide shade.

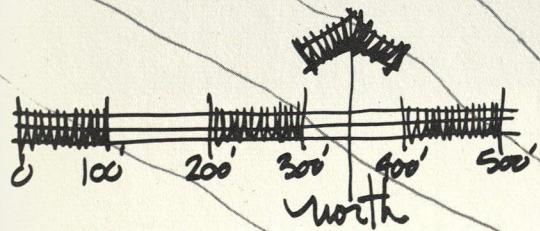
"Pedestrian Corridor" allows pleasant movement from parking areas to beach. Also connects with pedestrian trail system.

To Entrance Area

VISITORS CENTER

Controlled swimming area provides quiet, sheltered waters

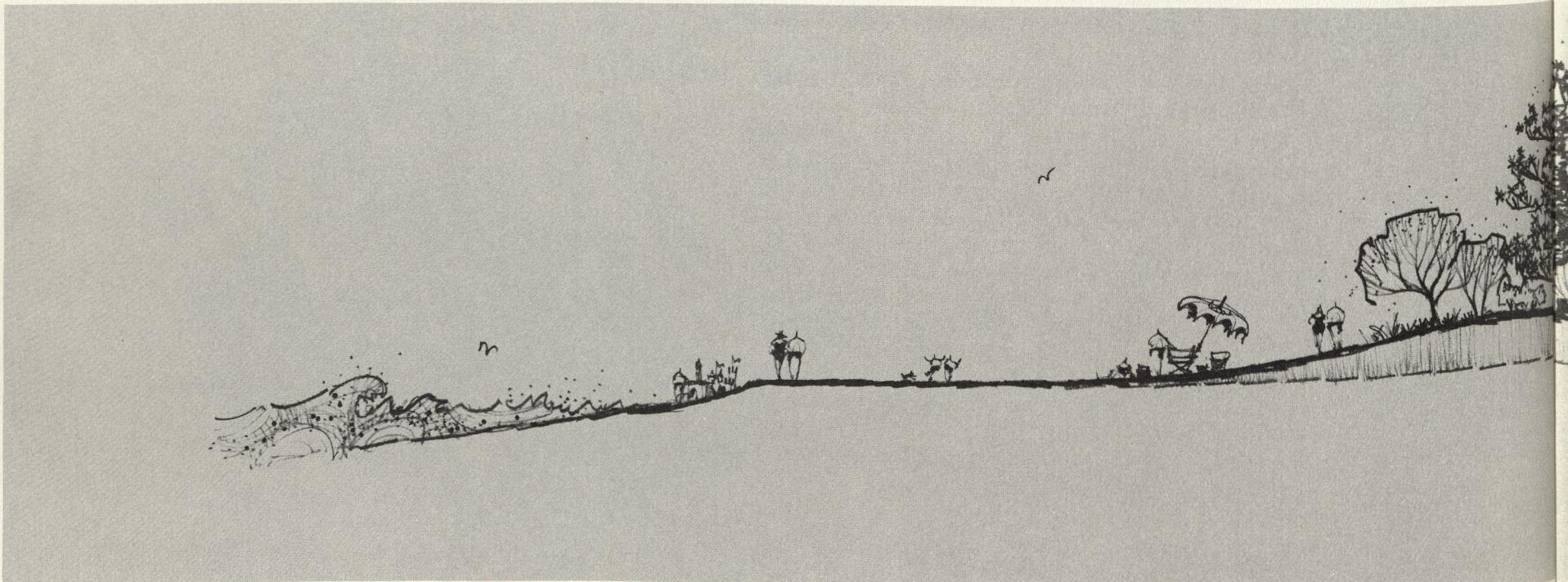
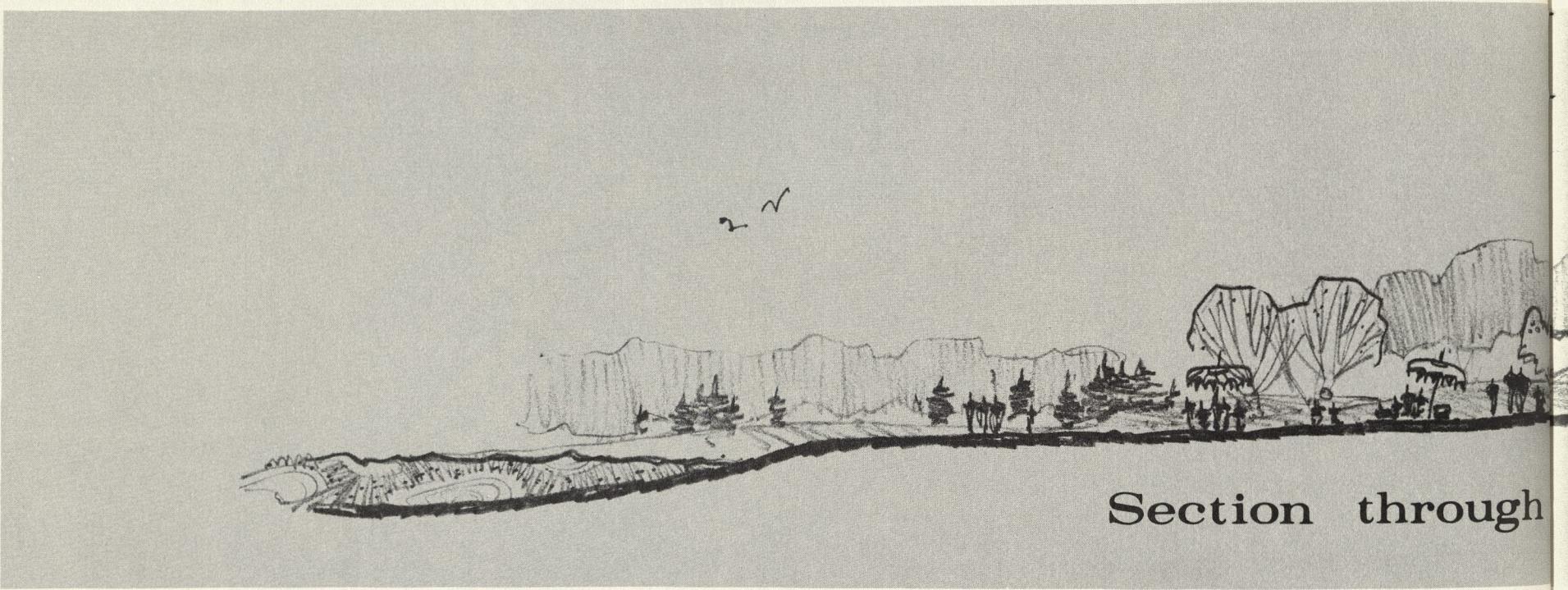
Beach walk allows ease of walking and provides access along beach for emergency vehicles.

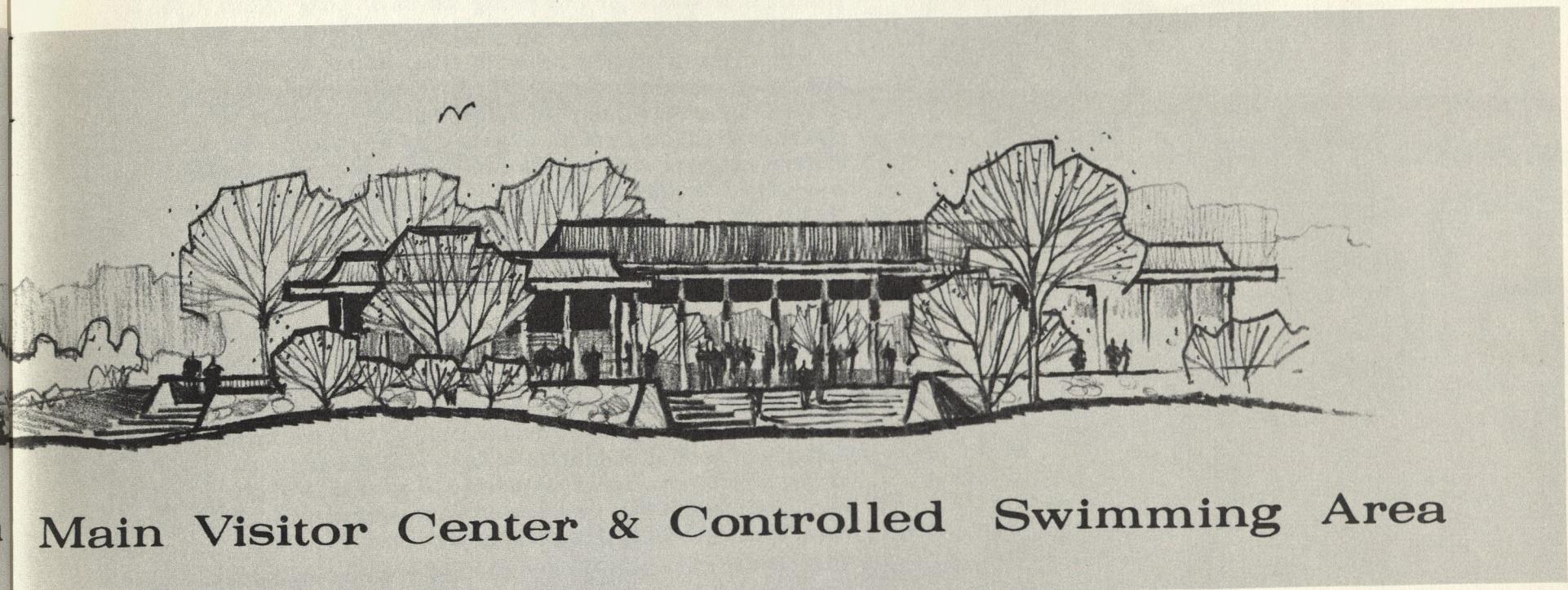


Planting on mounds aids in screening parking areas.

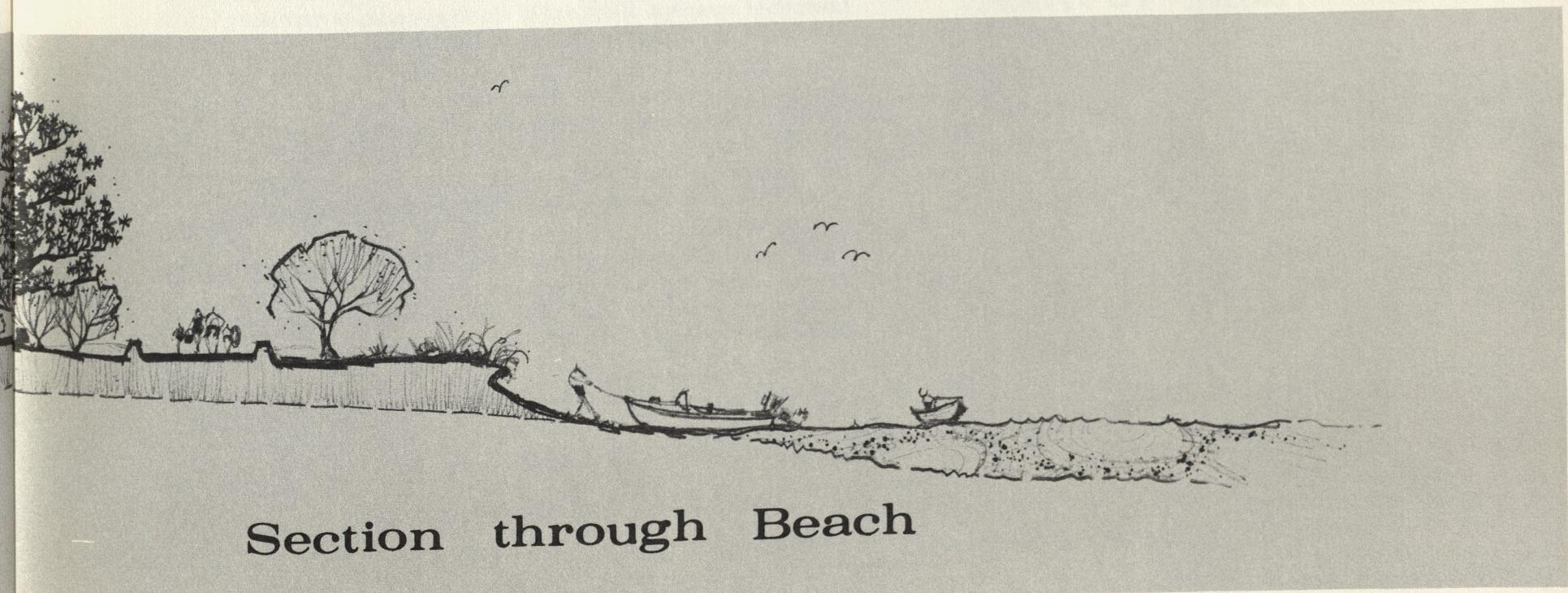
Bathhouse

To Bluff Point
Wetlands

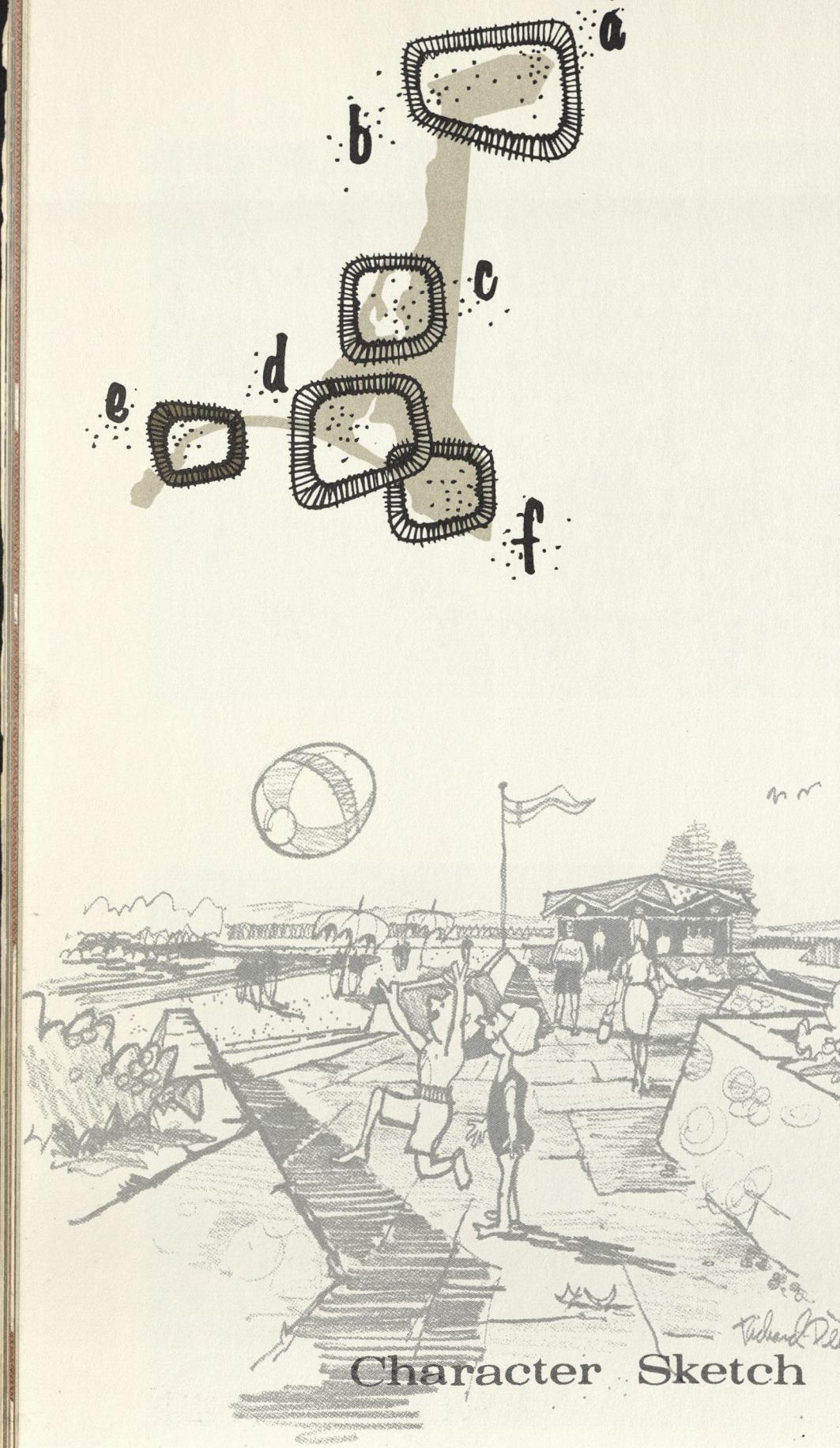




Main Visitor Center & Controlled Swimming Area



Section through Beach



BEACH LANDS and BUSHY POINT

Probably the single most attractive and stimulating element within the park is the gently curving crescent called the beach. Four thousand lineal feet of soft, clean sand provide a terminus for the rolling waves of Long Island Sound.

In direct respect for the power of these waves, however, steps must be taken to halt the continual erosion of the beach. Studies have indicated that the greatest damage to this beach is caused from the storm waves which wash over it, carrying away large amounts of sand. To control this erosion and stabilize the beach, the incorporation of stone baskets, or "gabions", could provide a solid core foundation. Additional placement of sand would then raise the peak elevation of the beach to at least ten feet above the mean water level at the sound.

Since many beach visitors will be carrying an armload of bulky towels, umbrellas, picnic baskets, and other bathing "necessities", the provision of a comfortable walking surface is necessary along this extensively long beach. Its location atop the stone foundation would add an extra measure of stabilization against storm waves, and, in addition, provide emergency access to the more distant sections. Its construction could be of precast concrete units, thus reducing on-site construction problems.

This stabilization and filling of the beach should continue across the washed-out portion now existing at Bushy Point. This would not only prevent further erosion, but would increase the length of the beach and provide access to the rocky shores and wooded knolls of this once-connected island.

Bushy Point is now dotted with the debris of careless and unwanted campers. Removal of these eyesores is necessary to reclaim the intimate beauty of the island.

The hydraulic fill required for this project can utilize the dredging operations under study for the area by the U. S. Corps of Engineers. Specifically, fill could be gained through dredging of Baker Cove and the Poquonock River. The material in the Poquonock River is that accumulation of sand which has been eroded from the beach and should be reclaimed.

Plant material introduced onto the beach lands will provide an extra measure of erosion control. Natural beach grasses, shore juniper, and pines will offer wind protection, shade and variety to this area.

Poquonock River dredged to afford smooth navigation for small boats and water recreation.

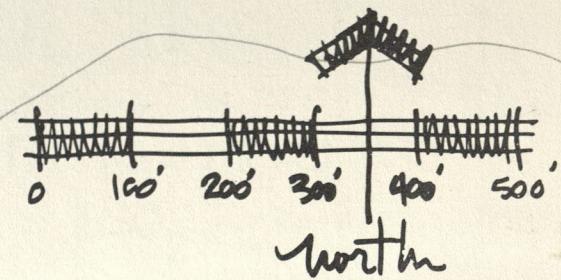
Planting on mounds aids in beach stabilization and affords visual relief.

beaching area for small boats

Breach filled and reclaimed as usable beach land

Beach Shelter provides service facilities for extended areas of beach.

natural character of Bushy Point retained as accent to beaches and as appropriate westerly terminus to Park.



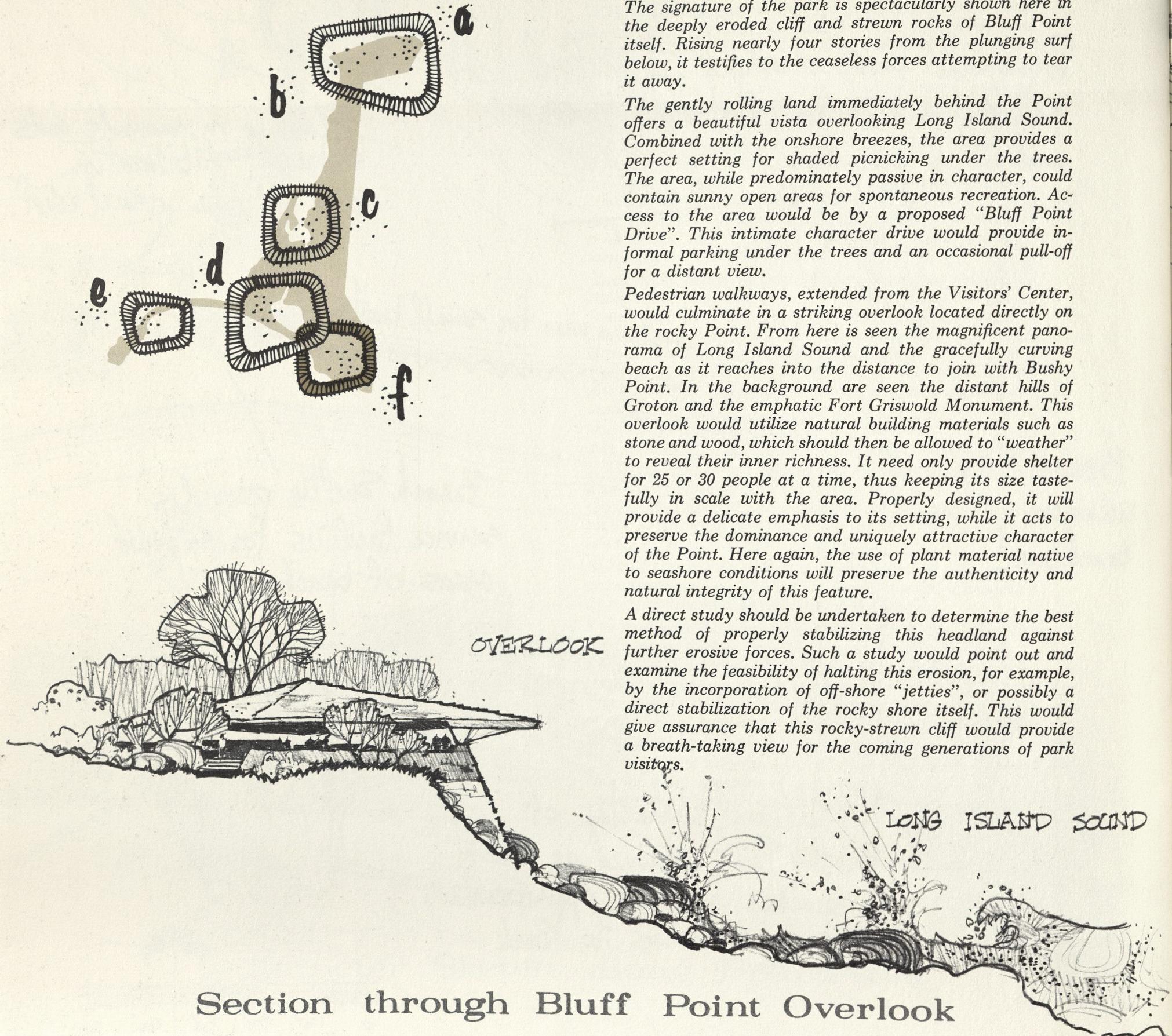
BLUFF POINT HEADLANDS

The signature of the park is spectacularly shown here in the deeply eroded cliff and strewn rocks of Bluff Point itself. Rising nearly four stories from the plunging surf below, it testifies to the ceaseless forces attempting to tear it away.

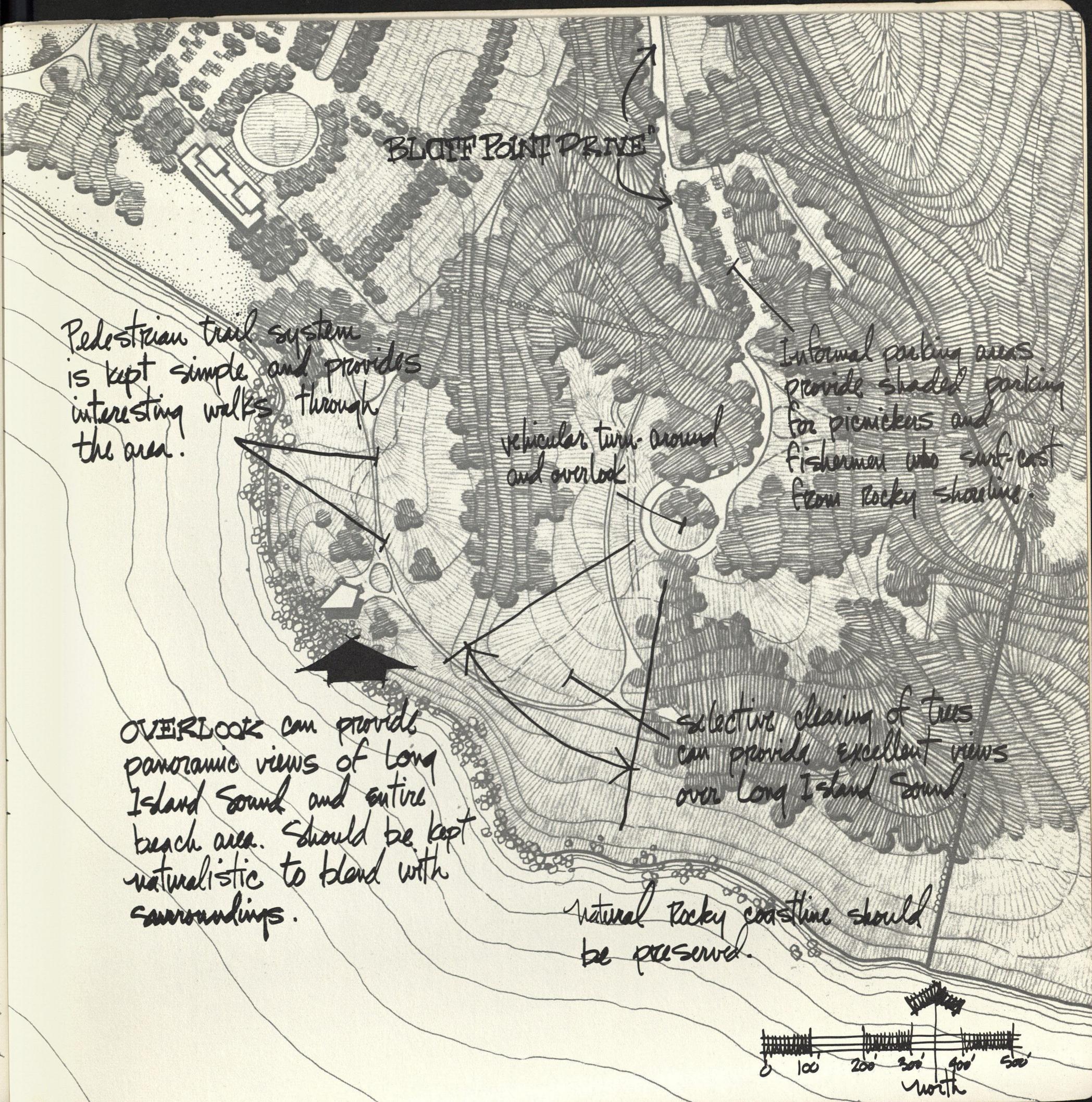
The gently rolling land immediately behind the Point offers a beautiful vista overlooking Long Island Sound. Combined with the onshore breezes, the area provides a perfect setting for shaded picnicking under the trees. The area, while predominately passive in character, could contain sunny open areas for spontaneous recreation. Access to the area would be by a proposed "Bluff Point Drive". This intimate character drive would provide informal parking under the trees and an occasional pull-off for a distant view.

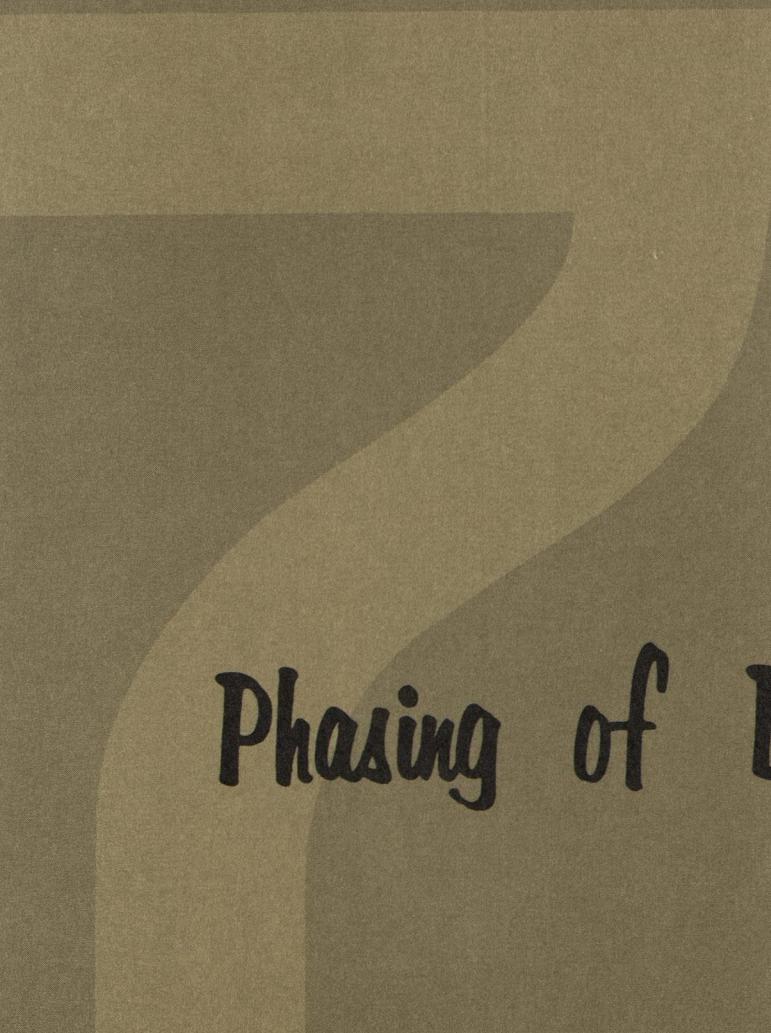
Pedestrian walkways, extended from the Visitors' Center, would culminate in a striking overlook located directly on the rocky Point. From here is seen the magnificent panorama of Long Island Sound and the gracefully curving beach as it reaches into the distance to join with Bushy Point. In the background are seen the distant hills of Groton and the emphatic Fort Griswold Monument. This overlook would utilize natural building materials such as stone and wood, which should then be allowed to "weather" to reveal their inner richness. It need only provide shelter for 25 or 30 people at a time, thus keeping its size tastefully in scale with the area. Properly designed, it will provide a delicate emphasis to its setting, while it acts to preserve the dominance and uniquely attractive character of the Point. Here again, the use of plant material native to seashore conditions will preserve the authenticity and natural integrity of this feature.

A direct study should be undertaken to determine the best method of properly stabilizing this headland against further erosive forces. Such a study would point out and examine the feasibility of halting this erosion, for example, by the incorporation of off-shore "jetties", or possibly a direct stabilization of the rocky shore itself. This would give assurance that this rocky-strewn cliff would provide a breath-taking view for the coming generations of park visitors.



Section through Bluff Point Overlook





Phasing of Development

Entry control building reverts to boat launch service building in later phases.

Boat launch area provides parking for approximately 35 cars with boat trailers.

Low areas, affected by floods, filled for road construction and erosion prevention.

Dredging of river allows safer navigation and provides required hydraulic fill - fill placed during earliest possible stages allows time for proper settlement and compaction.

Build-up of beach prevents further loss of sand and prepares the area for future shaping and planting.

Clean-up of Bushy Point halts present misuse and aids in preserving natural character.

Beach shaping and planting limited to support 3500 visitors in early stages.

Service area of minimal size provided in early stage.

"Poquonock River Parkway" (30' bituminous) utilizes existing road pattern near entry in early phase.

Utilities (electric, water) follow roadway pattern for maintenance ease.

Parking for 1000 cars provided in these phases.

Early acquisition of additional land (100 A^t) insures the inclusion of the historic site in future plans and prevents encroachment on the Headlands.

Phase 1

<i>Control building at boat launch area</i>	\$. 13,500.
<i>Utility services:</i>	
<i>Electric</i>	4,500.
<i>Septic</i>	750.
<i>Water</i>	15,400.
<i>Parking (boat launch)</i>	2,000.
<i>Planting, lighting, signs</i>	6,000.
<i>Boat ramps (2)</i>	1,600.
<i>Providing hydraulic fill</i>	475,000.
<i>Stone core for beach stabilization</i>	44,000.
<i>Professional services</i>	33,765.
<i>TOTAL PHASE 1:</i>	<u>\$596,515.</u>

Phase 2

<i>Bathhouse</i>	\$. 250,000.
<i>Utilities:</i>	
<i>Electric</i>	33,000.
<i>Water</i>	45,500.
<i>Sanitary</i>	3,000.
<i>Parking:</i>	
<i>Shaping and rolling (total area)</i>	12,200.
<i>Gravel (surface)</i>	4,300.
<i>Grass (surface)</i>	6,500.
<i>Gravel Service Area</i>	6,000.
<i>Road</i>	8,000.
<i>Screen planting</i>	2,000.
<i>Road</i>	65,000.
<i>Planting at Bathhouse and Parking</i>	15,000.
<i>Shaping of beach and Planting</i>	10,000.
<i>Bushy Point clean-up</i>	1,200.
<i>Professional Services</i>	27,133.
<i>TOTAL PHASE 2:</i>	<u>\$488,833.</u>

Entry group contains toll station, caretaker quarters, and information facilities.

Boat Launch parking area increased to provide parking for 35 additional cars.

Parking for picnickers provided in area of original entry which has now been discontinued to general thru-traffic.

Nature Preserve clean-up establishes the passive character of the area.

"Pedestrian corridor" provides improved tidal channel while linking the active and passive areas of the park.

Parking for an additional 1250 cars provided in Phase 4.

Shelter and restroom facilities provided for outer portions of the beach.

Beachwalk provided to aid and control circulation along beach while allowing for access of emergency apparatus.

Connection to Braudegee-Airport Loop.

Service area expansion required by growth of park. (includes shops, garages and storage)

Parking for an additional 2000 cars provided.

Visitors Center (primary stage) constructed to accommodate park administration, park displays, concessions and other facilities for the approx. 15,000 visitors to be served at the completion of these phases.

"Bluff Point Drive" constructed to Headlands which are now cleaned and provided with rest room facilities for hikers and picnickers.

Naturalistic overlook completes development on the Headlands.

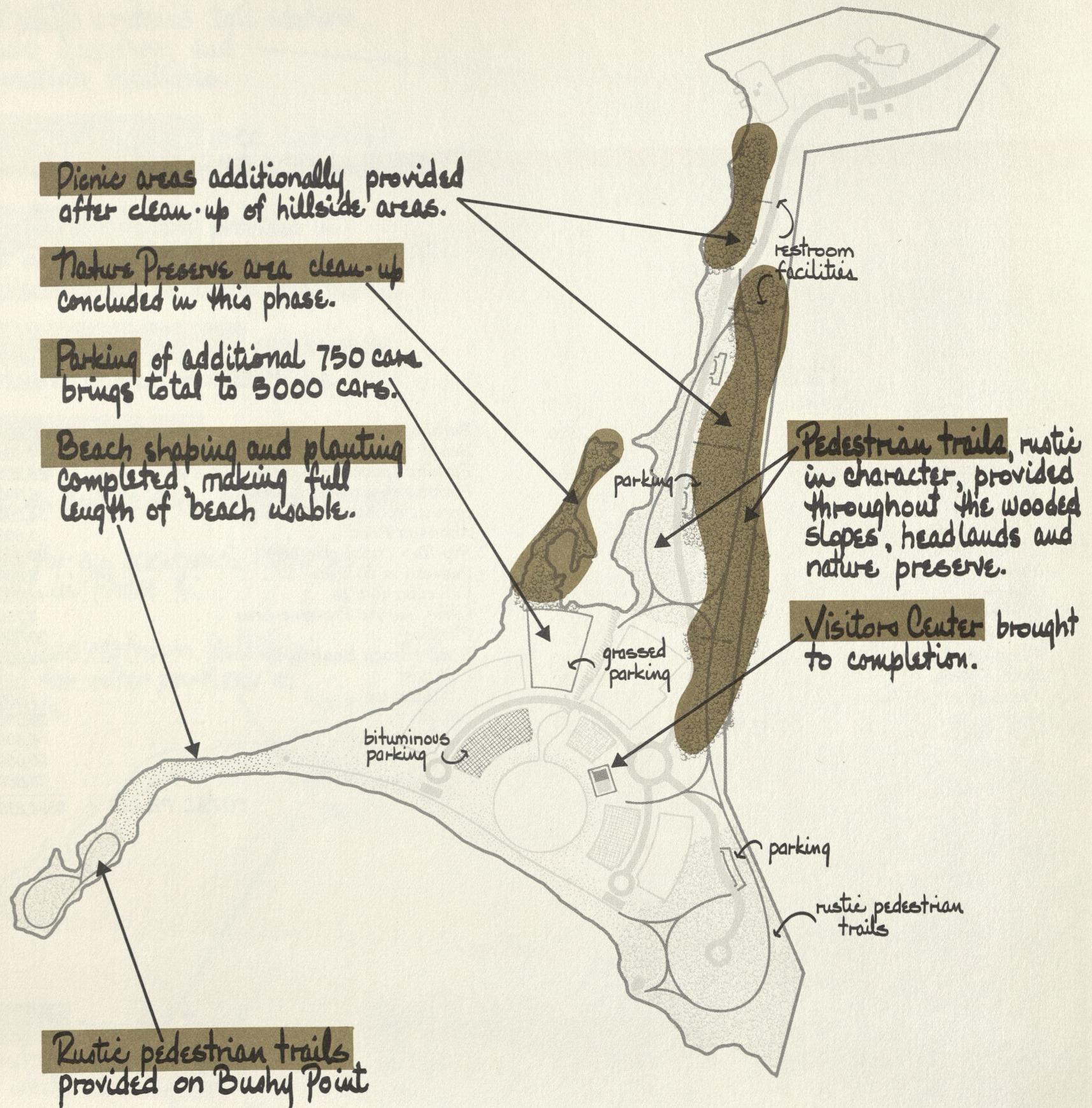
Beach shaping and planting carried on in both phases to provide beach space for the increased number of visitors.

Phase 3

Visitors Center (Stage 1)	\$400,000.
Road (Bluff Point Drive & connection to Brandegee-Airport Loop)	46,000.
Utilities:	
Water	10,200.
Electricity	1,200.
Sanitary	8,500.
Parking (paved and grass)	55,000.
Planting	20,000.
Overlook and Landscaping	10,000.
Walks	1,250.
Clean-up of Bluff Point Headlands	3,800.
Service Area	54,350.
Professional Services	<u>36,618.</u>
TOTAL PHASE 3: \$646,918.	

Phase 4

Bathhouse	\$250,000.
Beach Structure	4,000.
Parking (paved and gravel)	65,300.
Parking (boat launch area)	6,000.
Precast concrete walk on beach	54,000.
Abandon Road	1,800.
Rip-Rap (tidal channel)	23,000.
Pedestrian Bridges	9,000.
Vehicular Bridge	14,000.
Clean Nature Preserve Area	3,750.
Planting	20,000.
Road (Beach Boulevard)	32,000.
Utilities:	
Sanitary	1,500.
Water	20,300.
Electricity	6,500.
Entry Group	50,000.
Professional Services	<u>33,669.</u>
TOTAL PHASE 4: \$594,819.	



Phase 5

Visitors Center (completion)	\$350,000.
Clean-up of remaining Hillsides	7,500.
Utilities:	
Sanitary	4,500.
Water	25,200.
Electricity	6,000.
Precast Concrete Walk on Beach	24,000.
Gravel Walk	2,500.
Parking (paved and gravel)	87,200.
Planting	4,000.
Engineering Services	30,655.
TOTAL PHASE 5: \$541,555	

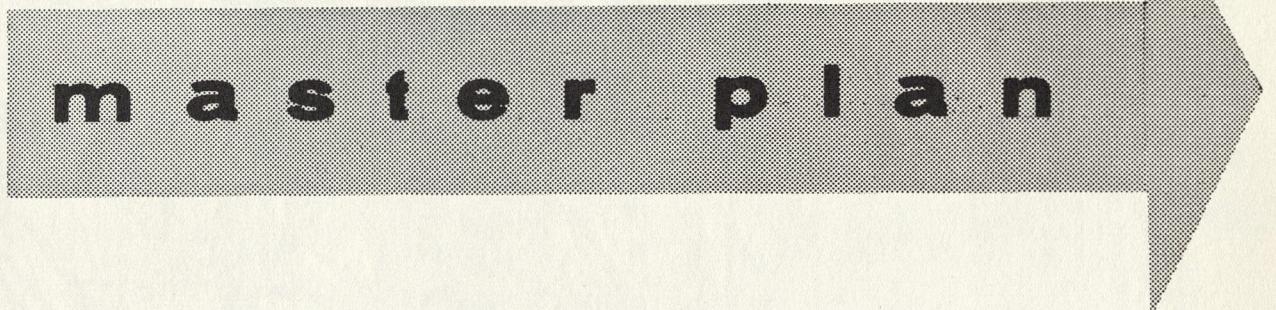
Total Development Costs

PHASE 1	\$ 596,515.
PHASE 2	\$ 478,833.
PHASE 3	\$ 646,918.
PHASE 4	\$ 594,819.
PHASE 5	\$ 541,555.
GRAND TOTAL: \$2,868,640.	





BLUFF POINT



master plan

appendix & bibliography

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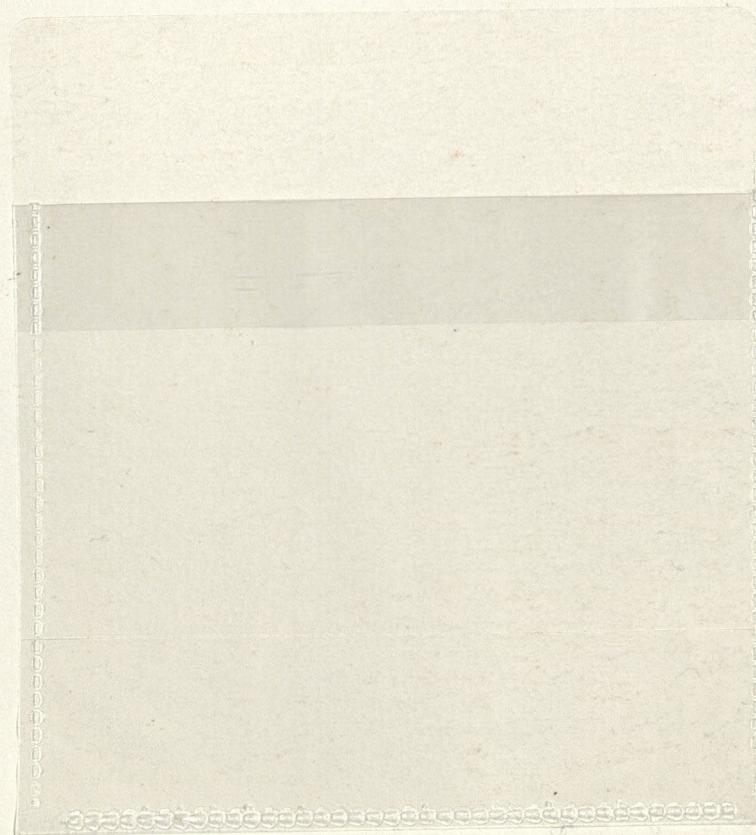
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CREDITS

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ABOUT THE DESIGN CONSULTANTS

Morton S. Fine & Associates of Bloomfield, Connecticut, is a firm which is well-experienced in the fields of site planning design and engineering. Their combined staff of graduate Landscape Architects, registered Civil Engineers, and licensed Land Surveyors enables them to provide comprehensive planning and engineering services for projects of varying scope. Recognized on one hand for their abilities in the preparation of master plans of development and overall site planning, they can also provide engineering services for projects such as flood control studies, highway engineering, and urban renewal.